

No.



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Rutgers, The State University of New Jersey
and Jacklin Seed by Simplot

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HERETO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC DEPOSIT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE EXCLUSIVE RIGHT TO SELL, OFFER FOR SALE, REPRODUCE, IMPORT, EXPORT, CONDITION, STOCK, OR USE IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED IN THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

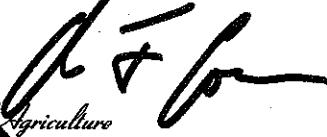
FESCUE, TALL

'Inferno'

In Testimony Whereof, I have hereunto set my hand
and caused the seal of the Plant Variety
Protection Office to be affixed at the City of
Washington, D.C. this twenty-ninth day of
November, in the year two thousand and seven.

Attest:


R.L. Zeller
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service


J.T. Conner
Agriculture

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE		The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995. Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).		
APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burden statement on reverse)				
1. NAME OF OWNER Rutgers, The State University of New Jersey and Jacklin Seed by Simplot		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME JT-99, L1J		3. VARIETY NAME Inferno
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 59 Dudley Road New Brunswick, NJ 08901 8520		5. TELEPHONE (Include area code) 732-932-9711		FOR OFFICIAL USE ONLY
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) University		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		PVPO NUMBER #200400145
		9. DATE OF INCORPORATION February 1983 (BT: 9/18/07 per applicant's authorization)		FILING DATE 3/22/2004
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) A. Doug Brede Jacklin Seed by Simplot 5300 W. Riverbend Ave. Post Falls, ID 83854				
11. TELEPHONE (Include area code) 208-773-7581		12. FAX (Include area code) 208-773-4846		FILING AND EXAMINATION FEES: \$ 3,652.00 DATE 3/22/2004 CERTIFICATION FEE: \$ 468.00 DATE 10/12/2007
14. CROP KIND (Common Name) Tall fescue		16. FAMILY NAME (Botanical) Gramineae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.
15. GENUS AND SPECIES NAME OF CROP Festuca aruhdinacea		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23) <input type="checkbox"/> UNDECIDED
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Exhibit F. Declaration Regarding Deposit g. <input checked="" type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) h. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input checked="" type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)		
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input type="checkbox"/> NO		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.				
SIGNATURE OF OWNER 		SIGNATURE OF OWNER 		
NAME (Please print or type) A. Douglas Brede		NAME (Please print or type) Director of Research & Associate Director, NIARS		
CAPACITY OR TITLE Director of Research		DATE 9/06/07 3/5/2004 (BT: 9/18/07)	CAPACITY OR TITLE	DATE 9/11/07

Exhibit 18A
Origin and Breeding History of Inferno Tall Fescue

Inferno (JT-99, L1J) tall fescue (*Festuca arundinacea* Schreb.) is a medium low-growing, dark green, medium-fine-leaved, turf-type tall fescue selected from the maternal progenies of 370 clones. Inferno was selected for high shoot density, dark-green color, semi-dwarf growth habit, and medium maturity. Approximately 80% of the parental germplasm in Inferno contain the *Neotyphodium* endophyte.

The parental germplasm of Inferno tall fescue traces its origin to plants selected from old turfs of the United States in a germplasm collection program initiated in 1962, to plants selected from or related to Rebel tall fescue. Attractive clones were selected from old turfs in Birmingham, AL; Athens, Atlanta, and Milledgeville, GA; Preston, ID; Baltimore, MD; Bayonne, Jersey City, Elizabeth, Princeton, and Cape May, NJ; eastern North Carolina; Philadelphia, PA; Nashville, TN; Lexington, KY; Cincinnati, OH; Dallas, TX; and northern Mississippi. The tall fescue plants selected from old turfs were of unknown origin. All were large patches of turf surviving in stressful environments indicating that they had persisted and developed over a period of many years.

A few hundred attractive, turf-type plants were collected and established in spaced-plant nurseries and/or frequently mowed clonal evaluation trials at Rutgers University. All but a few dozen of the most promising plants were quickly discarded. The best selections were very different from any tall fescue variety in existence at the time of collection. They produced lower-growing turfs with finer leaves, greater density, darker color, and greater tolerance of close mowing.

The most promising plants were identified by their persistence and appearance in old turfs and their performance in spaced-plant nurseries, mowed clonal evaluation tests, and single-plant progeny trials under turf performance. Intercrosses of the best performing plants were subjected to varying cycles of phenotypic and genotypic selection depending on their date of collection. New sources of germplasm were added to the breeding program as it became available from the continuing collection program. Each cycle of selection showed continued progress in producing lower-growing, dark green, attractive plants with improved turf performance scores. Selection was also effective in

maintaining high seed yields, and good stress tolerance. Substantial progress was made in developing tall fescues with finer leaves, a lower growth profile, increased persistence under close mowing and increased density.

Large numbers of single-plant progenies were seeded in turf evaluation trials at the Plant Science Research Farm at Adelphia, NJ in 1997, 1998 and 1999. The plants selected for progeny evaluation were selected from spaced-plant nurseries at Adelphia following varying cycles of phenotypic and genotypic selection of germplasm selected from old turfs and germplasm selected from or related to Rebel tall fescue.

Approximately, 7800 tillers were selected from the best performing single-plant progeny turf plots from the 1997, 1998, and 1999 tall fescue test at Adelphia. Eighty-three different single-plot progenies were selected from 1055 plots from 10 different populations from the 1997 test, 635 from 9 different populations from the 1998 test and 890 plots from 8 different populations from the 1999 test. These plants were established in greenhouse flats prior to their transfer to a spaced-plant nursery in the spring of 2000, consisting of 3900 plants. Selection was based on performance records as well as appearance at the time the plants were selected from these progeny plots. Selection of plants from each progeny was based on an attractive dark green color, medium-fine leaves, abundant tillering, high shoot density and freedom from disease.

In the spring of 2001, approximately 82% of the plants in this nursery were rouged for light green color, disease susceptibility, non-uniform growth habit, poor vigor and poor seed yield potential. Of the remaining plants, 370 plants or approximately 52% were harvested as Inferno (JT-99, L1J) tall fescue. These 370 plants were from 83 different single-plot progenies. These plants produced approximately 30 pounds of breeder seed. Replicated turf plots of Inferno were established at Adelphia in the fall of 2001 and entered in the 2001 National Tall Fescue test to be tested throughout the country. Fifteen pounds of breeder seed was sent to Jacklin Seed for foundation and certified seed increase.

Inferno is a uniform and stable cultivar. Seed samples of Breeder, Foundation, and Certified seed have produced turfgrass with comparable quality and acceptable uniformity. As with any sexually propagated variety, variants will arise in each generation. Uniformity of individual plant characteristics is 95%. Less than 5% variants

have been found in 5 years of production and they can be identified as having reduced seedhead initiation, maturity earlier or later than the majority of the field, or larger plant size compared to the Inferno plants. These variants are relatively infrequent in occurrence and are routinely rogued from seedstock fields during the first year of establishment.

Inferno is recommended for sports fields, home lawns, parks, and golf course out-of-play areas where tall fescue is suitable for turf. It can be grown in full sun or moderate shade.

Exhibit 18B
Statement of Distinctness

'Inferno' is a turf-type tall fescue with a dark green color, fine leaf texture and improved density. Inferno can be distinguished from all other varieties by the combination of spaced-plant and turf characteristics described in Tables 1-15. Inferno most closely resembles Rebel 2000 tall fescue, but can be separated from Rebel 2000 by a combination of the following characteristics:

1. Inferno has a significantly shorter plant height than Rebel 2000 (71.8 cm for Inferno versus 74.9 cm for Rebel 2000 in Trial 1, significant at the 0.05 level; 64.0 cm for Inferno versus 68.9 cm for Rebel 2000 in Trial 2, significant at 0.001 level; 72.9 cm for Inferno versus 79.3 cm for Rebel 2000 in ID 2006, significant at 0.001 level; 75.3 cm for Inferno versus 87.8 for Rebel 2000 in WA 2006, significant at 0.001 level) (Tables 1, 2, 7 and 8).
2. Flagleaf width of Inferno was significantly narrower than Rebel 2000 (4.1 mm for Inferno versus 4.9 mm for Rebel 2000 in Trial 1, significant at the 0.001 level; 3.4 mm for Inferno versus 4.9 mm for Rebel 2000 in Trial 2, significant at 0.001 level; 5.7 mm for Inferno versus 6.7 mm for Rebel 2000 in ID 2006, significant at 0.01 level; 5.4 mm for Inferno versus 6.6 mm for Rebel 2000 in WA 2006, significant at 0.001 level) (Tables 1, 2, 9 and 10).
3. Flagleaf length measured from the collar to the leaf tip of Inferno was significantly shorter than Rebel 2000 (7.8 cm for Inferno versus 9.1 cm for Rebel 2000 in Trial 1, significant at the 0.001 level; 7.6 cm for Inferno versus 9.9 cm for Rebel 2000 in Trial 2, significant at 0.001 level; 9.6 cm for Inferno versus 12.7 cm for Rebel 2000 in ID 2006, significant at 0.001 level; 6.4 cm for Inferno versus 9.3 cm for Rebel 2000 in WA 2006, significant at 0.001 level) (Tables 1, 2, 9 and 10).
4. Panicle length of Inferno was significantly shorter than Rebel 2000. (15.4 cm for Inferno versus 16.2 cm for Rebel 2000 in Trial 1, significant at the 0.05 level; 13.9 cm for Inferno versus 17.0 cm for Rebel 2000 in Trial 2, significant at 0.001 level; 14.1 cm for Inferno versus 16.6 cm for Rebel 2000 in ID 2006, significant at 0.001 level; 14.9 cm for Inferno versus 18.2 cm for Rebel 2000 in WA 2006, significant at 0.001 level) (Tables 1, 2, 7 and 8).
5. Tiller leaf length measured from the sheath collar to the leaf tip of Inferno was significantly shorter than Rebel 2000 (11.8 cm for Inferno versus 13.4 cm for Rebel 2000 in Trial 1, significant at the 0.001 level; 11.0 cm for Inferno versus 14.7 cm for Rebel 2000 in Trial 2, significant at 0.001 level) (Tables 1 and 2). The second leaf measured from the sheath collar to the leaf tip of Inferno was significantly shorter than Rebel 2000 (15.7 cm for Inferno versus 20.2 for Rebel 2000 in ID 2006, significant at the 0.001 level; 11.6 versus 14.1 for Rebel 2000 in WA 2006, significant at the 0.001 level) (Tables 9 and 10).
6. The flag leaf's sheath length of Inferno was significantly shorter than Rebel 2000 (15.9 cm for Inferno versus 18.0 cm for Rebel 2000 in Idaho 2006, significant at

the 0.001 level; 15.9 cm for Inferno versus 20.1 cm for Rebel 2000 in WA 2006, significant at 0.001 level) (Tables 7 and 8).

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY PROGRAM
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(TALL & MEADOW FESCUES)

OBJECTIVE DESCRIPTION OF VARIETY
TALL & MEADOW FESCUES
(*Festuca spp.*)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Rutgers, The State University of New Jersey and Jacklin Seed by Simplot	JT-99, L1J	Inferno
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)	FOR OFFICIAL USE ONLY	
5300 W. Riverbend Ave. Post Falls, ID 83854	59 Dudley Road New Brunswick, NJ 08901-8520	PVPO NUMBER #200400145

Place the appropriate number that describes the varietal characteristics of this variety in the boxes below. Use leading zeroes when necessary (e.g. 089). Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characteristics marked with an asterisk * are characteristics which should be recorded.

1. SPECIES: (With comparison varieties, use varieties within the species of the application variety)

1 = *F. arundinacea* (Tall)

Turf Types

1 = Kentucky 31 2 = Rebel 3 = Olympic 4 = Bonanza 5 = Arid 6 = Rebel II

7 = Shortstop 8 = Silverado 9 = Rebel Jr. 10 = Mini Mustang 11 = Crewcut 12 = Bonsai
13 = Rebel 2000 14 = Jaguar 3 15 = Pixie 16 = Southern Choice 17 = Finelawn Petite
Forage Types

20 = Kentucky 31 21 = Martin 22 = Forager 23 = Mozark

24 = Kenhy 25 = AU Triumph 26 = Fawn 27 = Cajun

2 = *F. pratensis* (Meadow)

30 = Admira 31 = Beaumont 32 = Comtessa 33 = Ensign 34 = Trader

2. CYTOLOGY:

42 Chromosome Number

ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

2 Transition Zone 2 West 2 Northeast Other (Specify): _____

4. MATURITY: (Date First Headed, 10% of Panicle Emergence)

5 Maturity Class 1 = Very early () 2 = AU Triumph 3 = Early (Fawn) 4 = K31, Kenhy 5 = Medium (Rebel)

4. MATURITY: (continued)

6 = Bonanza 7 = Late (Silverado) 8 = () 9 = Very late 4 0 0 1 4 5

Date Headed May 23, 2003Location Rathdrum, ID

 Days earlier than none

Maturity same as 5

 Days later than none

Comparison Variety

* 5. MATURE PLANT HEIGHT CM: (Average of 100 culms
from crown to top of panicle, if panicle is nodding, straighten)* INTERNODE LENGTH CM:
(First internode subtending the flag leaf)71 .8 cm Height 18 .2 cm Internode Length25 .0 cm Shorter than 5 7 .0 cm Shorter than 14

Height same as none

 cm Taller than none

Length same as none

 cm Longer than none

Comparison Variety

Comparison Variety

* HEIGHT AT EAR EMERGENCE CM: (Flag leaf height from crown to flag leaf collar)

35 .2 cm Height

16 .7 cm Shorter than 5

Height same as 13

 cm Taller than none

Comparison Variety

* 6. GROWTH HABIT: (Mature Plants)

9 1 = Prostrate () 3 = Semiprostrate () 5 = Horizontal ()
 7 = Semierect (Rebel) 9 = Erect (Mini Mustang)

* 7. RHIZOMES (Psuedo):

 mm Length 1 1 = Absent () 2 = Rare (Rebel) 3 = Common ()

* 8. LEAF BLADE: (Tiller leaves/ turf color)

* 7 Color: 1 = Light green () 3 = Medium light green () 5 = Green ()
 7 = Medium dark green (XX) 9 = Very dark green ()

 Specify rating of comparison variety* 1 Anthocyanin: 1 = Absent (XX) 9 = Present ()* 1 Basal Hairs: 1 = Absent (XX) 9 = Present ()* 9 Margins: 1 = Smooth () 5 = Semi-rough () 9 = Rough (XX)

8. LEAF BLADE: (continued)

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* 5 Width Class: 1 = Very coarse () 3 = Coarse () 5 = Medium (XX)
 7 = Fine () 9 = Very Fine ()

* TILLER LEAF LENGTH CM: (First leaf subtending the flag leaf)

11.8 cm Tiller Leaf Length
8.3 cm Shorter than 14
 Length same as none
 cm Taller than none

Comparison Variety

* TILLER LEAF WIDTH MM:

5.7 mm Tiller Leaf Width
1.1 mm Narrower than 1
 Width same as 13
 mm Longer than none

Comparison Variety

FLAG LEAF LENGTH CM:

7.8 cm Flag Leaf Length
3.0 cm Shorter than 16
 Length same as none
 cm Longer than none

Comparison Variety

FLAG LEAF WIDTH MM:

4.1 mm Flag Leaf Width
0.6 mm Narrower than 15
 Width same as none
 mm Wider than none

Comparison Variety

* 9. LEAF SHEATH: (Basal Portion)

* 1 Anthocyanin (seedling): 1 = Absent (K31) 9 = Present ()
 * 9 Auricle Hairiness: 1 = Absent () 9 = Present (XX)

* 10. PANICLE: (At seed maturity except where noted.)

* 1 Shape: 1 = Narrow-tapering (XX) 5 = Ovate () 7 = Oblong () 9 = Other (specify)
 * 7 Type: 1 = Compact (appressed) 5 = Intermediate () 7 = Open (XX) 9 = Other (specify)
 * 9 Orientation: 1 = Nodding () 9 = Erect (XX)
 * 1 Branch Pubescence: 1 = Glabrous (XX) 9 = Pubescent ()
 * 1 Anther Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green
 4 = Purplish 5 = Reddish 6 = Other (Specify)
 * 4 Glume Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green
 4 = Purplish 5 = Reddish 6 = Other (Specify)

* 15.4 cm Panicle Length (from base to tip, if nodding, straighten; after anthesis)

4.8 cm Shorter than 16
 Length same as none
 cm Longer than none

Comparison Variety

* 11. SEED: (With Lemma & Pelea)

* 2 2 2 7 mg per 1000 seeds

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6 2 3 mg Less than 15
 Weight same as 17
 mg More than none

} Comparison Variety

PALEA: (Keels or Margins)

1 Hairs: 1 = Absent (XX) 5 = Short (Missouri 96) 9 = Long ()

LEMMA:

1 Hairs: 1 = Absent (Keny) 5 = Several () 9 = Many (Missouri 96)

5.4 mm Lemma Length (Mature) 1.3 mm Lemma Width

0.7 mm Shorter than 1
 Length same as none
 mm Longer than none

0.1 mm Narrower than 14

Width same as none
 mm Wider than none

*AWNS: 9 AWNS: 1 = Absent () 9 = Present (Falcon) 86 % Plants with awns

1.4 mm Awn length (Of those present.)

0.2 mm Shorter than 1
 Length same as 13
0.3 mm Longer than 17

} Comparison Variety

12. DISEASE, INSECT, AND NEMATODE REACTION: (0= Not Tested 1= Least Resistant 9= Most Resistant)

0 Melting-out *Drechslera poae* 0 Blind Seed *Gloeotinia temulenta*

0 Leaf Spot *D. siccans* 0 Dollar Spot *Lanzia, Mollerdiscus* spp.

0 Net Blotch *D. dictyoides* 0 Stem Rust *Puccinia graminis*

7 Brown Patch *Rhizoctonia solani* 0 T. Blight *Typhula incarnata*

0 C. Leaf Spot *Cercospora fectucae* 7 Pythium Blight *Pythium* spp.

5 Pink Snow Mold *Gerlachia nivalis* 0 Powdery Mildew *Erysiphe graminis*

0 Silver Top *F. tricinctum, F. roseum* 0 Crown Rust *Puccinia coronata*

6 Other Disease Pink Patch *Limonomycés roseipellis*

 Other Insect

 Other Nematode

13. ENVIRONMENTAL STRESS

4 Drought Stress 1 = Susceptible () 5 = Tolerant () 9 = Resistant ()

13. ENVIRONMENTAL STRESS: (continued)

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5 Shade Stress 1 = Susceptible () 5 = Tolerant () 9 = Resistant ()

6 Winter Stress 1 = Susceptible () 5 = Tolerant () 9 = Resistant ()

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics, indicate the degree of resemblance with the following scale:

1 = Application variety is less than comparison variety 2 = Same as 3 = More than, better, greater, darker, etc.

Character	Varieties	Rating	Character	Varieties	Rating
Leaf Width	Southern Choice, Pixie	1	Leaf Color	Rebel 2000	2
Panicle Color	Pixie	2	Panicle Shape	Pixie	2
Seed Size	Rebel 2000	1	Cold Injury	Finelawn Petite	2
Winter Color	Jaguar 3	2	Heat	Jaguar 3	2
Disease	Rebel 2000	2			

* 15. EXPERIMENTAL: Give a brief summary of the experimental design utilized to collect the data used on this form. Cultural conditions, number of plants measured and plant spacing must be specified.

Space plants were planted on 2.5 ft. centers in June 2002 in 20-plant rows and replicated 4 times at each location. So there were 80 plants per variety at each location. Trial 1 was planted on an Avonville fine gravelly silt loam near Rathdrum, Idaho and Trial 2 was planted on a Garrison silt loam near Rathdrum, Idaho. Trial 1 was more fertile and watered more consistently. Data was recorded between May and August 2003.

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Exhibit 18D
Additional Description of the Variety

Inferno is most similar to Rebel 2000 in our tests and was selected from improved plants that trace their parentage back to the original Rebel. Inferno was developed from plants exhibiting superior turf characteristics compared to the top varieties at the time of selection.

Inferno tall fescue is well adapted for turf purposes around the country. Table 5 shows Turfgrass Quality ratings at 16 locations around the U.S. under a High Maintenance regime in the 2001 Tall Fescue National Turfgrass Evaluation Program (NTEP) trial. Inferno performed well in the West, the Midwest, Northeast, Mid Atlantic and in the South. Inferno had quality similar to F-4 (now known as Falcon 4), Justice, Avenger, Davinci, Blackwatch, 2nd Millennium, Cochise III, Cayenne, and Rebel Exeda. Inferno was statistically superior to Magellan, Constitution, Tar Heel II, Rembrandt, Silverado II, Guardian-21, and Plantation.

Inferno tall fescue has medium dark color. Table 6 shows Genetic Color in the 2001 Tall Fescue NTEP trial. Inferno has similar color ratings to Bingo, Signia, Matador, Raptor, Tracer, Coyote, Cochise III, Justice, Davinci, Southern Choice II and Tempest. Inferno is darker than Laramie, Rembrandt, Millennium, Dynasty, Scorpion, Bravo, Barlexus and Silverstar.

Inferno tall fescue can be grown on sports fields, home lawns, parks, and golf course out-of-play areas where tall fescue is suitable for turf. It can be grown in full sun or moderate shade.

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Table 1. Tall fescue morphology Trial 1 at Rathdrum, ID on an Avonville fine gravelly silt loam. Data was taken at maturity, 2003 data.

Variety	Culm to flagleaf (cm)	Plant height (cm)	Internode length (cm)	Flagleaf width (mm)	Flagleaf length (cm)	Panicle length (cm)	Tiller leaf length (cm)	Tiller leaf width (mm)	prob. prob.	prob. prob.	prob. prob.	prob. prob.	
Inferno	35.16	71.78	18.20	4.12	7.79	15.42	11.81	5.66					
Arid	51.92	96.80	0.000	4.89	0.000	11.00	0.000	0.000	20.15	0.000	17.26	0.000	
Rebel 2000	36.79	74.87	0.036	19.14	0.013	4.89	0.000	9.09	0.001	16.21	0.025	13.38	0.000
Jaguar 3	48.94	93.31	0.000	25.23	0.000	5.77	0.000	13.41	0.000	22.34	0.000	20.09	0.000
Pixie	39.98	84.86	0.000	20.68	0.000	4.66	0.000	10.03	0.000	17.75	0.000	15.46	0.000
Southern Choice	42.55	87.53	0.000	21.42	0.000	4.69	0.000	10.75	0.000	20.20	0.000	16.04	0.000
Finelawn Petite	40.32	83.17	0.000	20.76	0.000	5.03	0.000	9.76	0.000	17.82	0.000	14.22	0.000
KY-31	60.11	106.43	0.000	27.25	0.000	4.68	0.000	10.39	0.000	21.81	0.000	19.44	0.000
Variable Means	44.86	88.24	22.2	4.85	10.37	18.97	16.06	6.28					
N size	1191	1178	1246	1200	1192	1246	1193	1247					
CV%	26.7	18.3	21.2	28.9	35.5	22.6	28.0	21.8					

Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 2. Tall fescue morphology Trial 1 at Rathdrum, ID on a Garrison gravelly silt loam. Data was taken at maturity. 2003 data.

Variety	Culm to flag leaf (cm)	Plant height (cm)	Internode length (cm)	Flagleaf width (mm)	Panicle length (cm)	Tiller leaf length (cm)	Tiller leaf width (mm)
	prob.	prob.	prob.	prob.	prob.	prob.	prob.
Inferno	30.35	64.04	16.41	3.37	7.64	13.90	11.02
Southern Choice	43.99	0.000	83.03	0.000	21.94	0.001	10.46
KY-31	55.61	0.000	99.89	0.000	26.66	0.000	11.43
Arid	44.42	0.000	87.42	0.000	23.99	0.000	4.47
Pixie	42.37	0.000	80.19	0.000	22.39	0.000	4.65
Jaguar 3	47.01	0.000	84.25	0.000	24.20	0.000	4.75
Rebel 2000	36.01	0.000	68.88	0.000	19.84	0.000	4.94
Finelawn Petite	40.79	0.000	79.20	0.000	22.35	0.000	5.13
Variable Means	42.57	80.86	22.23	4.41	10.48	18.92	15.90
N-size	1248	1247	1246	1248	1243	1246	1243
CV%	24.1	17.9	18.9	31.0	40.8	19.7	25.4

Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

200400745

Table 3. Seed head emergence in days after April 30, 2003 on tall fescue morphology Trial 1 and Trial 2 at Rathdrum, ID. Trial 1 was planted on an Avonville fine gravelly silt loam. Trial 2 was planted on a Garrison gravelly silt loam. 2003 data.

Variety	Trial 1	<i>prob.</i>	Trial 2	<i>prob.</i>
Inferno	22.3		24.3	
Arid	22.0	0.882	25.0	0.658
Rebel 2000	24.3	0.244	22.0	0.191
Jaguar 3	22.3	1.000	24.3	1.000
Pixie	22.8	0.768	24.0	0.882
Southern Choice	22.0	0.891	23.8	0.767
Finelawn Petite	23.3	0.555	23.5	0.658
KY-31	20.8	0.379	23.8	0.767
Mean	22.5		23.8	
N-size	31		24	
CV%	10.2		9.4	

Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

#200400145

Table 4. Tall fescue morphology Trial 1 at Rathdrum, ID planted on an Avonville fine gravelly silt loam. 2003 data.

Variety	Lemma Length		Lemma Width		Lemma Width-length		Seed weight		Awn length	
	(mm)	prob.	(mm)	prob.	ratio	prob.	(mg/1000 seeds)	prob.	(mm)	prob.
Inferno	5.40		1.28		0.24		2226.9		1.35	
Arid	5.89	0.000	1.36	0.000	0.23	0.000	2485.4	0.052	1.40	0.458
Jaguar 3	6.05	0.000	1.41	0.000	0.24	0.002	2556.8	0.015	1.43	0.166
KY-31	6.10	0.000	1.39	0.000	0.23	0.000	2511.4	0.034	1.50	0.013
Finelawn Petite	5.81	0.000	1.34	0.000	0.23	0.000	2439.7	0.107	1.08	0.000
Pixie	5.77	0.000	1.36	0.000	0.24	0.422	2849.9	0.000	1.24	0.048
Rebel 2000	5.49	0.016	1.34	0.000	0.25	0.002	2240.1	0.919	1.37	0.761
Southern Choice	5.85	0.000	1.33	0.000	0.23	0.000	2478.7	0.058	1.27	0.179
Mean	5.76		1.34		0.235		2473.61		1.33	
N-size	7106.00		7100		7099		32		427	
F-test value	56.52		40.38		15.84		4.63		10.00	

Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 4B. Tall fescue morphology Trial 2 at Rathdrum, ID planted on a Garrison gravelly silt loam. 2003 data.

Variety	Lemma Length		Lemma Width		Lemma Width-length		Seed weight		Awn length	
	(mm)	prob.	(mm)	prob.	ratio	prob.	(mg/1000 seeds)	prob.	(mm)	prob.
Inferno	5.54		1.36		0.25		2391.3		1.19	
Arid	6.12	0.000	1.38	0.004	0.23	0.000	2769.8	0.001	1.22	0.549
Jaguar 3	6.03	0.000	1.39	0.000	0.23	0.000	2676.4	0.010	1.19	0.980
KY-31	6.14	0.000	1.41	0.000	0.23	0.000	2403.1	0.917	1.37	0.001
Finelawn Petite	5.92	0.000	1.43	0.000	0.24	0.012	2387.7	0.972	1.18	0.847
Pixie	6.11	0.000	1.41	0.000	0.23	0.000	2799.7	0.000	1.15	0.463
Rebel 2000	5.66	0.006	1.40	0.000	0.25	0.019	2565.4	0.102	1.14	0.399
Southern Choice	6.43	0.000	1.45	0.000	0.23	0.000	2991.3	0.000	1.48	0.000
Mean	5.94		1.39		0.237		2634.6		1.24	
N-size	6522		6518		6517		30		420	
F-test value	76.67		30.32		60.82		9.00		9.97	

Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 5.

MEAN TURFGRASS QUALITY RATINGS OF TALL FESCUE CULTIVARS
GROWN AT SIXTEEN LOCATIONS IN THE U.S. 1/
MAINTAINED USING "SCHEDULE A" **
2002 DATA

NAME	TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF																
	AR1	CA3	GA1	IN1	KY1	MD1	MII	NC1	NJ1	NJ2	OK1	TX1	TX3	VA1	WA1	WA3	MEAN
* F-4	4.9	6.8	6.8	5.1	7.1	5.9	5.9	6.6	7.1	6.6	6.5	5.9	5.1	6.7	6.3	5.0	6.1
* JUSTICE (RB2-01)	5.2	6.7	7.0	5.1	7.0	5.9	5.5	6.8	7.0	6.6	5.8	5.3	6.8	6.3	4.8	6.1	6.1
* INFERNO (JT-99)	5.6	6.9	7.0	5.5	6.7	6.3	5.7	6.3	7.0	6.9	6.1	6.2	5.1	6.0	6.3	4.6	6.1
KOI-WAF	5.6	6.8	6.9	5.3	7.1	6.3	5.7	6.3	7.0	6.9	6.7	6.2	4.9	6.6	5.7	4.9	6.1
* AVENGER (L12)	5.4	6.7	6.9	5.2	6.7	6.1	5.3	6.1	6.5	7.0	6.7	5.9	6.2	5.9	6.2	5.9	4.8
* DAVINC (LTB-7801)	5.0	6.5	7.4	5.6	7.0	5.8	5.4	7.3	5.9	6.5	6.3	6.1	5.1	6.4	6.3	4.4	6.1
R-4	5.2	6.6	7.0	5.4	7.4	6.3	5.4	6.6	6.8	6.4	6.8	5.3	4.9	5.9	6.2	4.6	6.1
* BLACKWATCH (PICK-OD3-01)	5.0	6.8	7.1	5.3	6.2	5.8	5.5	7.0	5.9	6.4	6.7	6.1	5.1	6.5	6.3	4.6	6.1
* 2ND MILLENNIUM	5.5	6.8	6.9	5.3	6.5	6.0	5.8	6.8	5.8	5.6	6.5	6.1	5.3	6.3	6.4	4.6	6.0
* COCHISE III (018)	5.2	6.6	7.0	5.3	6.5	6.7	5.3	6.8	6.0	6.4	6.5	6.0	5.3	6.0	6.3	5.0	6.0
* CAYENNE	4.9	6.5	6.7	5.2	7.6	6.4	5.2	6.4	5.8	5.3	6.8	5.3	5.2	6.9	6.3	4.4	6.0
* REBEL EXEDA	5.4	6.4	7.3	5.2	6.3	6.3	5.5	6.7	5.3	6.5	6.3	5.7	5.1	6.4	6.3	5.0	6.0
DLSD	5.3	6.3	7.0	5.2	6.3	6.1	5.4	6.8	6.0	6.3	6.5	6.0	4.9	7.1	6.1	4.2	6.0
* BINGO	4.9	6.6	7.0	4.9	6.6	6.0	5.4	7.3	6.0	5.5	6.8	6.0	5.2	6.2	6.1	4.9	6.0
* TITANIUM (SBM)	4.8	6.7	6.4	5.3	7.0	6.4	5.1	6.6	5.6	5.7	5.5	6.1	5.0	7.0	6.3	4.6	6.0
KOI-8015	4.8	6.7	7.0	5.2	7.1	5.9	5.7	6.3	7.0	5.3	6.7	5.8	5.3	5.9	6.0	4.4	5.9
BE1	5.0	6.7	7.1	5.0	6.6	6.3	5.4	6.4	5.6	5.3	6.9	5.5	5.1	7.1	6.1	4.8	5.9
* BILTMORE	4.9	6.4	6.9	5.2	6.8	6.0	5.1	6.8	6.1	6.1	6.5	5.9	4.6	6.6	5.8	5.0	5.9
PST-57E	5.0	6.5	7.0	5.0	7.1	6.0	5.4	7.0	5.6	5.7	6.1	6.8	6.1	7.1	6.1	4.2	6.0
* PARDE (NJ4)	4.9	6.5	6.8	5.0	6.9	6.8	5.4	6.4	5.6	5.6	5.5	6.1	4.7	6.3	6.3	5.2	5.9
UT-RB3	5.1	6.5	7.3	5.0	7.3	5.8	5.6	6.6	5.2	5.0	7.0	5.6	5.0	5.5	6.1	5.1	5.9
* KALAHARI	5.0	6.7	6.8	5.2	7.0	5.9	5.7	5.9	5.3	5.9	6.4	5.7	4.9	7.2	6.1	4.5	5.9
MCN-RC	4.9	6.4	7.3	5.1	6.5	6.2	5.4	6.6	5.5	5.8	6.9	5.4	5.2	6.6	5.8	4.8	5.9
CAS-MCL	4.9	6.8	7.0	5.0	7.0	6.2	5.3	6.4	5.4	5.5	6.5	5.6	5.3	6.7	6.1	4.5	5.9
CIS-TF-67	5.4	6.5	6.5	5.3	6.5	5.4	5.6	7.0	5.5	5.3	6.7	5.9	5.0	6.3	6.3	4.8	5.9
* PICASSO	4.9	6.6	7.1	5.0	6.9	5.6	5.3	6.4	5.2	5.2	6.9	5.8	5.3	6.5	6.2	5.1	5.9
* RENDITION	4.8	6.7	6.7	5.2	6.3	6.1	5.2	6.4	5.7	5.9	6.5	5.9	4.9	7.0	6.1	4.5	5.9
* FORTE (BE-2)	5.4	6.4	7.1	5.1	6.3	6.0	5.5	6.8	5.5	5.7	6.8	5.7	5.4	6.0	5.8	4.3	5.9
01-ORU1	4.5	6.6	6.5	4.8	7.3	6.1	5.6	6.3	5.7	5.6	5.7	5.7	5.4	6.0	5.8	4.3	5.9
* SILVERSTAR (PST-JASR)	5.1	6.3	7.4	4.9	6.8	5.7	5.3	6.4	5.0	4.9	6.9	6.0	5.1	6.9	5.7	4.3	5.9
QUEST	4.9	6.4	7.0	5.3	7.3	5.9	5.1	6.3	5.4	5.3	6.7	5.7	5.0	6.0	6.2	4.7	5.9
PST-5T1	5.1	6.4	7.3	5.0	6.9	6.1	5.4	6.7	5.6	5.1	6.7	5.6	5.3	6.7	5.8	3.9	5.9
* RAPTOR (CIS-TF-33)	5.3	5.9	6.2	5.0	6.7	6.1	5.6	6.2	5.5	5.8	6.7	5.8	5.4	6.4	6.3	4.8	5.9
* MAGELLAN (OD-4)	4.9	6.6	6.8	5.2	7.0	6.2	5.7	6.7	5.3	4.7	6.8	6.1	4.7	6.1	6.3	4.6	5.8
PST-5A1	5.3	6.9	5.0	6.2	6.6	5.6	5.6	6.5	5.4	5.2	6.7	5.7	5.0	6.8	5.8	4.0	5.8
* CONSTITUTION (ATP-593)	5.0	6.5	7.0	5.1	7.1	5.9	5.2	6.2	5.0	5.0	6.8	5.9	5.4	6.9	5.9	4.0	5.8
* TAR HEEL II (PST-5TR1)	5.1	6.6	7.2	4.9	6.5	6.2	5.2	6.9	5.6	4.9	6.9	5.7	5.1	6.4	5.5	4.6	5.8
* REMBRANDT	4.9	6.2	6.6	5.1	6.2	6.1	5.3	6.1	5.6	5.1	6.9	5.7	5.1	6.4	5.5	4.6	5.8
PICK-00-AFA	4.8	6.4	7.0	5.2	6.0	5.7	5.2	6.6	5.3	4.7	6.8	5.8	5.4	7.1	5.8	5.0	5.8
* SILVERADO II (PST-578)	5.1	6.5	7.2	5.0	7.0	6.2	5.2	6.8	5.4	4.8	6.9	5.9	5.7	6.7	6.7	4.3	5.8
PST-DDL	4.9	6.3	6.7	4.9	6.2	5.7	5.6	6.5	6.1	5.8	6.5	5.7	4.9	6.5	5.8	4.4	5.8
* GUARDIAN-21 (ROBERTS DOL)	4.7	6.6	6.6	5.0	6.8	5.6	5.2	6.5	5.9	6.1	6.5	5.9	4.9	6.1	6.7	4.2	5.8
CIS-TF-60	5.6	6.5	6.9	4.8	6.5	6.5	5.2	7.1	5.6	4.1	6.7	5.4	4.5	6.3	6.3	4.7	5.8
* PLANTATION	5.2	6.6	6.5	6.6	6.5	6.5	6.7	5.6	5.3	5.6	5.6	5.1	6.1	6.0	5.1	6.5	5.8

200400140

Table 5 (cont.)

MEAN TURFGRASS QUALITY RATINGS OF TALL FESCUE CULTIVARS
GROWN AT SIXTEEN LOCATIONS IN THE U.S. 1/
MAINTAINED USING "SCHEDULE A" **
2002 DATA.

200400145

NAME	TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/														
	IN1	KY1	MD1	MI1	NC1	NJ1	NJ2	OK1	TX1	TX3	WA1	WA3	MEAN		
* REBEL SENTRY	5.0	6.5	7.1	5.2	6.2	5.4	5.3	6.6	5.1	5.6	6.9	5.7	5.6	6.0	4.9
PST-5BZ	4.9	6.1	6.5	5.0	7.0	6.3	5.7	6.1	5.3	5.3	6.8	5.7	5.1	6.3	4.7
PST-5FZD	4.8	6.4	7.1	5.2	5.6	6.0	5.7	6.6	5.5	5.2	6.4	5.7	5.3	7.0	5.9
PST-5L0	5.1	6.4	6.7	4.9	6.0	6.3	5.5	6.7	5.2	5.0	6.8	5.7	5.4	6.8	4.3
* PROSEEDS 5301	5.0	6.4	6.3	4.9	6.2	6.1	5.5	6.2	5.1	5.6	6.9	5.8	5.9	6.3	5.8
BAR FA 1005	5.4	6.6	7.2	5.0	6.1	6.0	5.0	7.0	5.5	5.4	6.9	5.6	5.6	6.3	4.7
* SR 8550 (SRX 8BE4)	4.6	6.6	6.7	4.8	6.7	6.1	5.5	7.0	5.4	5.4	6.8	5.9	5.5	6.0	4.2
* OLYMPIC GOLD	4.8	6.3	7.1	5.3	6.1	6.3	5.3	5.9	5.0	5.2	6.5	5.6	5.4	5.9	4.8
* WOLFPACK	5.0	6.7	6.9	5.3	6.4	5.6	5.4	6.0	4.8	5.1	6.0	4.8	7.0	5.0	5.8
B-7001	4.8	6.7	7.4	5.0	6.1	6.0	5.2	6.6	4.6	5.6	6.9	5.8	5.1	6.8	5.7
* GRANDE II	5.1	6.5	5.2	6.7	6.1	5.4	5.4	6.4	4.2	4.8	6.8	5.4	5.1	6.5	4.8
* SR 8600	4.9	6.6	7.0	5.1	6.8	5.6	5.2	6.6	4.8	5.4	6.7	5.4	4.9	6.1	4.5
ROBERTS SM4	4.8	6.6	7.3	4.9	6.6	6.0	5.2	6.5	4.6	5.1	6.5	5.6	4.9	6.0	4.8
GO-OD2	4.7	6.2	7.2	4.7	6.1	5.5	5.5	6.8	4.8	5.0	6.7	5.2	6.7	6.3	4.7
CIS-TF-65	5.1	6.5	5.9	5.0	6.2	5.8	5.3	6.9	5.3	4.8	6.8	5.0	6.7	6.3	5.8
UT-155	4.2	6.7	7.0	4.6	6.7	5.9	5.3	6.5	5.0	5.1	6.4	6.1	6.4	6.6	4.1
* MASTERPIECE	5.0	6.6	7.1	4.8	5.8	6.0	5.2	6.2	5.2	4.7	6.7	5.8	5.3	7.0	5.8
MRF 27	4.6	6.4	7.3	4.8	6.8	5.6	5.4	6.9	4.9	4.6	6.8	5.4	5.4	6.6	4.1
PST-5BAB	4.2	6.4	6.7	4.7	7.0	6.2	5.2	6.5	4.8	4.7	6.5	5.6	5.6	6.7	4.7
CAS-157	4.5	6.7	7.1	4.9	6.8	5.6	5.4	6.3	5.0	4.7	6.5	5.7	5.2	6.4	4.8
PST-53T	5.3	6.5	6.5	4.9	6.5	6.0	5.1	6.6	5.2	4.9	6.7	5.6	5.0	6.2	5.9
MA 138	5.0	6.2	7.0	4.6	6.5	6.0	5.3	6.3	4.6	4.5	6.6	5.7	5.5	6.9	4.9
* FOCUS	4.9	6.5	7.2	4.6	6.5	5.7	5.4	6.3	4.9	4.8	6.8	5.4	5.2	6.4	5.7
K01-E03	4.5	6.3	7.1	4.7	6.3	5.6	5.4	6.4	5.4	4.9	6.3	5.0	5.0	6.0	4.8
* MATADOR	4.6	6.6	6.8	4.9	6.3	5.4	5.3	5.9	5.7	5.3	6.7	5.7	5.5	6.5	4.7
PST-5S12	4.9	6.3	6.6	4.6	6.6	5.0	5.4	6.7	4.8	5.2	6.6	6.0	5.8	6.0	4.7
PST-5JM	4.8	6.5	7.1	4.7	5.6	5.7	5.2	6.7	5.4	5.0	6.9	5.5	5.8	6.0	4.7
NA-TDD	4.9	6.3	7.0	5.0	6.2	5.9	5.2	6.5	4.9	4.9	6.8	5.9	5.0	6.0	5.0
01-RUTOR2	4.4	6.4	7.1	4.9	6.6	6.5	5.4	5.7	5.5	4.9	6.1	6.8	5.9	5.3	5.8
PST-5TUO	4.6	6.4	6.9	4.6	6.5	5.8	5.5	6.8	5.0	4.7	6.9	5.3	5.2	6.7	3.9
PST-5KI	4.7	6.2	7.0	4.9	5.6	6.0	5.2	6.2	5.2	5.0	6.4	5.7	5.3	6.4	4.7
* TAR HEEL	4.8	6.5	6.8	5.4	6.3	5.7	5.4	6.0	4.5	4.5	6.7	5.2	4.9	6.8	4.3
MRF 25	4.8	6.5	6.5	4.8	5.8	5.9	5.3	6.4	4.8	4.4	6.8	5.6	5.3	6.8	4.8
* COYOTE	5.3	6.6	7.0	4.8	6.5	6.1	5.3	6.4	4.8	4.1	6.8	5.8	5.8	6.3	5.7
* MUSTANG 3	5.1	6.8	7.0	4.7	5.5	5.7	5.3	6.5	4.8	4.2	6.8	5.8	5.3	6.1	4.5
ATF 799	4.5	6.3	7.0	4.8	6.0	6.2	5.4	6.3	4.3	4.8	6.7	5.8	5.1	6.3	4.6
ATF 702	5.1	6.5	6.8	4.9	6.3	5.9	5.3	6.8	4.4	4.8	6.8	5.0	4.8	6.8	4.8
EA 163	4.9	6.1	6.9	4.8	6.5	6.4	5.3	5.9	4.8	4.1	6.7	5.6	5.1	5.8	4.6
CIS-TF-77	4.5	6.5	6.9	4.7	6.4	6.1	5.3	6.3	4.2	4.6	6.8	5.1	5.6	6.0	4.5
* ENDEAVOR	4.8	6.5	6.9	4.8	6.2	5.8	5.3	6.7	5.2	5.1	6.8	5.4	5.0	6.3	4.8
MA 127	4.8	6.4	6.8	4.7	6.7	5.8	5.1	6.3	4.0	4.2	6.8	5.9	4.9	7.0	4.9
* BARRERA	5.1	6.5	6.9	5.3	6.9	5.7	5.0	6.2	4.6	4.8	6.8	5.9	4.6	6.4	4.4
MRF 26	5.2	6.4	6.9	4.8	6.3	5.6	5.5	6.4	4.3	4.0	6.8	5.2	5.7	5.6	4.5
* SR 8250	5.1	6.3	6.6	5.0	6.5	6.0	5.3	5.9	4.6	4.6	6.7	5.1	5.5	6.3	4.8
* PROSPECT	4.3	6.7	6.9	4.8	6.3	5.0	5.5	6.5	4.8	4.7	6.7	5.6	5.2	6.2	5.6

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Table 5 (cont.)

MEAN TURFGRASS QUALITY RATINGS OF TALL FESCUE CULTIVARS
 GROWN AT SIXTEEN LOCATIONS IN THE U.S. 1/
 MAINTAINED USING "SCHEDULE A" **
 2002 DATA

NAME	TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/												MEAN
	IN1	KY1	MD1	MT1	NC1	NJ1	NJ2	OK1	TX1	TX3	WA1	WA3	
* BRAVO	4.8	7.0	5.2	6.5	6.0	5.1	5.9	4.9	4.3	6.8	5.2	6.2	5.6
BAR FA 1003	5.0	6.6	7.0	5.0	6.0	5.9	5.1	6.2	4.2	6.8	5.4	6.7	4.8
PST-5KU	4.9	6.6	7.3	4.4	6.1	6.0	5.0	6.4	4.7	5.0	6.6	5.3	5.6
* WATCHDOG	4.5	6.6	7.2	5.2	6.1	5.6	5.3	5.9	4.9	5.5	4.9	5.8	4.6
PICK ZMG	4.9	6.7	6.4	4.8	6.3	6.0	5.4	6.1	4.9	6.5	6.1	5.2	4.2
MRF 29	5.1	6.3	6.8	4.6	6.6	6.2	5.2	6.5	4.5	6.3	5.9	5.8	4.8
CAS-ED	5.1	6.4	6.8	4.7	6.2	6.0	5.4	5.9	4.7	6.6	5.8	6.0	4.3
KO1-E09	4.5	6.3	6.8	4.8	6.3	5.4	5.4	7.0	5.1	4.7	6.8	5.9	4.4
* MILLENIUM	5.6	6.6	7.0	5.0	5.8	5.6	5.2	6.2	4.7	6.7	5.5	6.5	5.6
* BARLEXAS II	4.6	6.3	6.7	5.1	6.8	5.7	5.5	5.9	4.8	6.7	5.7	5.0	4.4
JT-6	5.1	6.6	7.0	4.7	5.6	5.3	5.6	6.6	4.8	6.7	5.5	5.1	4.9
* DYNASTY	4.6	6.1	7.0	5.0	6.5	5.0	5.3	6.3	5.4	6.1	6.0	6.2	5.0
* SRX 805	4.8	6.8	6.7	4.5	6.3	5.4	5.4	6.5	4.2	6.8	5.9	5.3	4.3
PST-5NAS	4.7	6.5	7.1	4.8	5.8	5.8	5.0	6.4	4.2	6.8	5.5	6.1	4.3
* SCORPION	4.4	6.4	6.5	5.1	6.3	5.6	5.0	6.4	5.3	6.6	5.6	5.1	4.4
* BARTINGTON	4.4	6.5	7.2	4.8	6.9	5.6	5.3	6.0	5.0	6.8	5.7	5.8	4.2
* JAGUAR 3	4.6	6.7	7.0	5.0	6.0	5.3	5.3	6.1	4.4	6.7	5.6	5.4	4.6
MRF 28	5.0	6.7	7.3	4.5	5.9	6.0	5.4	6.1	4.5	6.4	5.7	5.3	4.2
* TRADER	4.9	6.4	6.9	4.8	6.3	5.8	5.1	5.9	4.8	6.0	5.6	6.3	4.2
JT-15	4.7	6.2	6.9	4.8	6.2	6.0	5.1	6.3	4.5	6.6	5.8	5.1	4.9
P-58	4.3	6.2	6.9	5.0	6.0	5.2	5.6	6.0	5.2	6.8	5.7	5.8	4.9
* TEMPEST	4.9	6.6	6.5	4.8	6.4	5.4	5.6	5.9	5.1	6.4	5.6	6.8	3.9
* WYATT	4.6	6.3	7.0	5.0	6.0	5.7	5.3	5.7	4.3	6.3	5.6	6.0	4.7
MRF 210	5.3	6.1	6.8	4.5	6.3	5.9	5.2	6.0	4.5	6.9	5.8	6.2	4.8
JT-9	4.6	6.3	7.0	4.8	6.7	5.9	5.8	6.6	4.5	6.9	5.7	6.4	4.5
* DAYTONA (MRF 23)	5.0	6.4	6.8	5.0	6.6	5.6	5.1	5.9	4.0	6.7	5.2	5.1	4.4
MRF 211	4.6	6.5	6.8	4.5	6.3	5.7	5.4	6.8	4.8	6.7	5.6	6.4	4.8
ATF-800	5.1	6.6	6.8	4.5	6.4	6.0	5.6	5.9	4.1	6.7	5.3	5.1	4.3
BAR FA 1CR7	5.6	6.7	6.4	4.8	6.3	5.8	5.5	6.0	4.2	6.2	6.0	5.4	4.3
* SOUTHERN CHOICE II	4.9	6.8	6.9	4.8	6.1	5.2	5.6	6.1	4.1	6.8	5.9	6.4	3.8
CIS-TE-64	4.8	6.3	6.6	4.5	6.7	5.8	5.3	6.4	5.1	6.6	5.7	5.3	4.3
* FINESSE II	5.0	6.0	7.0	4.6	6.2	5.3	5.1	6.5	4.8	6.8	5.6	5.4	4.2
* SIGNIA	5.0	6.4	7.0	4.6	6.7	4.8	5.2	5.1	4.7	6.7	5.3	5.2	3.6
* KITTY HAWK 2000	4.3	6.5	6.9	4.6	6.0	5.7	5.1	6.5	4.7	6.4	5.9	5.2	4.6
PICK TF H-97	3.8	6.6	7.1	5.1	6.6	5.4	5.2	5.4	4.8	6.8	6.2	6.0	4.8
ATF-803	4.8	6.6	6.8	4.7	6.0	5.5	5.1	5.8	4.5	6.7	5.1	6.3	3.8
ATF 802	4.1	6.7	6.7	4.8	6.0	5.8	4.9	5.9	4.7	6.7	5.6	7.1	4.4
JT-12	5.0	6.6	6.9	4.6	5.8	5.8	5.1	6.3	4.7	6.4	5.9	6.2	4.8
MA 158	3.9	6.8	6.5	4.5	5.5	5.5	5.5	5.2	4.5	6.5	5.7	5.0	3.8
* TOMAHAWK RT	4.8	6.5	6.6	4.5	6.1	5.5	5.2	5.6	4.3	4.5	6.9	5.9	4.7
ATF 704	4.9	6.3	7.0	4.7	6.5	5.4	5.1	5.8	3.6	6.4	5.8	6.1	4.9
T991	4.9	6.5	7.1	4.8	5.3	5.3	5.3	6.6	4.3	6.8	5.0	6.5	4.5
* PURE GOLD	4.0	5.9	7.0	4.7	5.6	5.1	5.2	5.7	4.5	6.4	5.5	5.0	4.5
KO1-8007	4.5	6.4	6.9	4.6	6.0	5.4	5.0	5.7	4.3	6.7	5.0	5.8	4.4
* BARLEXAS	4.5	6.0	6.9	5.0	5.4	5.4	5.4	6.0	4.9	6.1	5.7	5.8	5.0

Table 5 (cont.)

MEAN TURFGRASS QUALITY RATINGS OF TALL FESCUE CULTIVARS
GROWN AT SIXTEEN LOCATIONS IN THE U.S. 1/
MAINTAINED USING "SCHEDULE A" **
2002 DATA

NAME	TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/																
	AR1	CA3	GA1	IN1	KY1	MD1	MI1	NC1	NJ1	ND1	OK1	TX1	TX3	VA1	WA1	WA3	MEAN
JT-13	5.2	6.4	6.8	4.7	5.7	5.8	5.2	6.5	5.0	4.5	6.3	5.1	5.0	4.9	5.9	4.4	5.5
TF66	4.7	6.3	6.9	4.9	6.4	4.9	5.4	6.3	4.4	4.3	6.7	5.8	5.2	5.4	5.6	4.4	5.5
ATF 566	4.4	6.3	6.6	5.1	5.6	5.4	5.0	5.4	4.3	4.1	6.8	5.9	5.2	6.5	5.9	4.8	5.5
* SOUTH PAW (MRF 24)	4.8	6.6	6.7	4.7	6.0	5.8	5.1	6.0	3.7	3.7	6.8	5.5	5.1	6.8	5.9	4.1	5.5
* LARAMIE	4.5	6.5	6.8	4.8	6.1	5.4	5.0	5.7	4.0	4.7	6.4	6.0	5.1	5.4	6.2	4.7	5.5
ATF 806	4.2	6.4	6.6	4.8	5.6	5.0	5.6	5.9	4.4	4.1	6.7	5.8	5.0	6.6	6.1	4.4	5.4
* TITAN LTD.	3.7	6.5	6.3	5.0	6.4	5.1	5.4	5.3	4.5	4.5	6.5	5.9	5.1	6.1	5.4	5.2	5.4
DLF-3210	4.8	6.4	7.0	4.6	5.8	5.3	4.9	6.1	3.5	3.9	6.7	5.9	5.2	6.3	5.9	4.5	5.4
01-TFR3	4.2	6.1	6.6	4.6	6.0	5.4	5.2	6.3	4.1	4.0	6.8	5.6	5.1	6.5	5.7	4.7	5.4
DP 50-9226	4.4	6.4	7.0	4.2	5.7	5.6	5.1	6.3	4.3	3.9	6.7	5.4	5.2	6.6	5.8	4.1	5.4
JT-18	4.9	6.7	6.2	4.7	6.0	5.0	5.2	6.2	4.6	4.1	6.5	5.2	4.9	5.5	6.3	3.9	5.4
* TULSA II (ATF 706)	4.5	6.5	6.7	4.7	5.8	5.4	4.9	5.4	4.0	4.0	6.7	5.7	5.2	6.5	5.5	4.5	5.4
* DOMINION	4.6	6.4	6.9	5.0	5.3	5.6	5.3	5.6	4.3	3.8	6.7	5.7	5.0	5.9	5.8	4.8	5.4
* FALCON II	4.8	6.1	6.7	4.8	5.8	5.4	5.0	5.8	3.7	3.6	6.6	5.8	5.2	6.5	5.7	4.8	5.4
* LEGITIMATE	4.6	6.4	7.1	4.4	5.7	5.1	5.0	5.1	4.1	4.1	6.3	5.7	5.0	6.7	5.9	4.8	5.4
ATF 707	4.0	6.4	6.8	4.8	6.3	5.2	5.0	5.2	4.0	3.3	6.9	5.7	5.2	6.0	6.2	4.6	5.3
* LANCER	4.5	6.3	6.5	4.7	6.1	5.2	4.9	5.4	3.9	4.1	6.9	5.7	5.2	6.5	5.8	4.5	5.4
GO-RDA	4.4	6.3	7.0	4.8	5.1	5.0	4.9	5.8	3.4	3.3	6.3	5.4	5.1	6.4	5.8	4.6	5.3
* ELISA	3.8	6.1	6.8	5.2	4.9	5.0	5.0	4.8	4.7	3.6	6.8	5.9	5.2	6.5	5.7	5.2	5.4
* STETSON	4.0	6.2	6.7	4.7	5.9	5.5	4.9	5.8	3.6	3.6	6.5	5.7	5.0	6.0	6.0	4.5	5.4
JTFF-2000	3.9	6.5	6.9	4.5	5.0	4.8	5.0	5.2	4.0	3.3	6.9	5.7	4.8	6.0	6.2	4.6	5.3
GO-SITZ	3.8	6.3	7.0	4.7	5.5	5.0	4.8	5.7	3.2	3.2	6.7	5.5	4.8	5.1	5.8	4.1	5.3
GO-FL3	3.5	5.6	6.9	4.9	5.6	5.0	4.9	5.0	3.8	3.3	6.3	5.4	4.6	5.6	5.0	4.6	5.1
DP 50-9082	3.7	5.9	7.0	4.5	5.6	5.3	4.9	5.3	3.5	2.7	6.5	5.3	4.9	5.0	4.8	3.8	5.0
* BONSAI	3.1	6.2	6.5	4.5	5.5	4.8	5.0	4.9	3.4	3.0	5.8	5.1	5.1	6.0	5.1	4.2	4.9
* KY-31 E+	3.0	4.8	6.0	4.4	4.0	3.4	4.4	4.5	1.2	1.1	5.9	5.3	5.0	4.0	3.5	4.0	4.0
LSD VALUE	1.0	0.8	0.7	0.6	1.0	0.8	0.6	0.7	0.8	0.7	0.5	0.7	0.6	1.4	0.7	0.2	0.7
C.V. (%)	12.6	7.7	6.6	7.8	9.4	8.6	6.7	6.7	10.2	9.3	5.0	7.6	7.6	14.0	7.2	9.6	8.7
*	COMMERCIALLY AVAILABLE IN THE USA IN 2003.																

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.

STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

** SCHEDULE A - 1.5-2.0 INCH MOWING HEIGHT
3 - 5 lbs. N/1000 FT2/YEAR
IRRIGATION TO PREVENT VISUAL DROUGHT STRESS

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Table 6.

GENETIC COLOR RATINGS OF TALL FESCUE CULTIVARS 1/
2002 DATA

NAME	GENETIC COLOR RATINGS 1-9; 9=DARK GREEN												MEAN									
	ARI	CAB	GAI	IA1	IL1	IL2	IN1	KS2	MA1	MD1	MI1	MI2	MO1	NC1	NJ1	NJ2	PA1	TX1	VA1	WA1	WA3	WI1
CIS-TF-60	5.7	7.0	9.0	7.3	6.7	9.0	7.3	8.0	6.0	8.0	4.0	5.3	6.3	7.3	7.7	8.7	8.0	7.7	9.0	8.0	5.7	7.2
MRF 28	6.3	7.0	9.0	7.3	6.7	8.7	7.3	8.0	5.7	7.3	5.0	4.7	6.0	6.3	7.0	8.0	7.7	8.7	7.3	9.0	7.0	7.1
CIS-TF-65	5.7	7.0	9.0	7.0	6.3	7.7	6.7	6.3	8.0	4.7	4.7	6.3	5.3	7.0	8.7	7.7	7.3	8.3	7.3	9.0	8.0	6.0
MRF 211	6.3	7.0	8.7	7.7	6.0	7.7	6.7	7.7	6.0	7.3	4.7	4.7	6.0	7.7	8.0	7.7	8.3	7.3	9.0	7.3	6.0	7.1
SRX 805	6.7	7.0	9.0	7.0	5.7	8.7	8.0	6.7	6.7	7.3	4.3	5.3	6.0	7.7	6.3	8.3	7.3	9.0	7.7	9.0	7.7	5.3
NA-TDD	5.0	7.0	9.0	7.0	6.7	8.7	7.0	6.0	5.7	7.0	4.7	5.0	5.7	7.0	7.3	8.3	7.3	7.3	9.0	8.0	6.0	7.0
MRF 210	5.7	7.0	9.0	7.0	6.0	8.3	7.0	7.7	5.7	7.0	4.7	5.0	6.0	7.3	8.0	7.0	8.7	7.3	9.0	7.3	6.0	7.0
MRF 29	5.7	7.0	9.0	7.0	6.7	8.0	7.0	6.7	5.7	7.0	5.0	5.0	6.0	6.7	7.7	7.7	7.3	8.3	7.3	9.0	7.7	6.0
PST-53T	6.0	7.0	9.0	8.0	5.7	7.3	6.7	6.3	6.3	7.3	5.0	5.7	5.7	8.0	8.0	7.7	6.3	8.0	7.0	9.0	7.3	6.0
BAR FA 1CR7	5.7	7.0	9.0	8.0	6.3	8.0	7.0	7.3	5.7	7.3	4.7	5.0	6.0	6.3	6.0	7.7	8.0	8.0	7.0	9.0	7.7	6.0
JT-13	6.3	7.0	9.0	7.3	5.7	7.7	6.0	6.7	5.7	7.3	5.0	4.7	6.0	7.7	7.7	7.7	7.3	8.3	7.0	9.0	7.7	6.0
JT-6	6.0	7.0	9.0	7.0	6.0	8.3	7.0	7.3	5.0	7.0	4.7	5.3	5.3	7.3	7.3	7.0	7.0	8.7	7.0	9.0	8.0	6.3
MRF 25	7.0	7.0	9.0	7.0	6.3	7.3	6.7	6.0	7.0	5.0	4.7	5.7	6.7	8.3	7.3	6.7	8.7	7.0	9.0	8.0	5.7	6.9
UT-RB3	6.3	7.0	9.0	7.3	6.7	7.0	6.0	6.7	6.3	7.0	4.7	5.3	5.7	7.3	7.7	7.7	6.7	8.7	7.7	9.0	7.0	5.7
UT-155	6.7	7.0	8.7	7.3	6.3	6.3	6.0	6.0	6.0	7.7	5.0	5.0	5.3	7.0	8.3	7.7	6.7	8.7	7.3	9.0	7.7	5.7
5.3	7.0	9.0	7.7	6.0	7.7	6.7	7.0	5.7	7.0	4.0	5.0	6.0	7.3	6.7	8.3	7.0	8.0	7.0	9.0	7.0	7.6	6.9
7.3	7.0	9.0	7.3	6.0	6.7	5.7	5.7	5.7	7.0	5.0	5.0	5.3	8.0	9.0	6.7	7.3	8.0	7.0	9.0	7.0	7.0	5.7
R01-0015	5.0	7.0	9.0	7.0	6.3	8.0	6.7	6.7	5.3	7.0	4.0	4.7	6.0	7.3	7.7	7.0	7.0	8.7	7.0	9.0	8.0	6.3
MRF 26	6.0	7.0	9.0	7.3	6.7	8.0	7.0	6.3	6.3	7.0	4.0	5.3	5.3	7.3	7.3	7.0	6.3	8.0	7.0	9.0	7.7	6.0
BINGO	6.3	7.0	8.7	7.0	6.7	8.0	7.0	7.0	5.3	7.0	4.0	5.3	5.3	7.3	7.3	7.0	6.3	8.0	7.3	9.0	7.3	6.8
JT-18	7.3	7.0	8.7	7.3	6.0	7.7	6.3	7.0	5.3	7.0	4.7	5.7	8.0	7.0	7.0	6.7	8.0	7.0	9.0	7.3	6.0	6.8
PST-5KU	5.7	7.0	8.3	7.3	5.7	7.0	7.0	6.3	5.7	7.3	4.7	4.3	5.0	6.3	8.3	7.7	6.7	8.7	6.7	9.0	7.7	5.3
CIS-TF-67	7.0	7.0	8.7	7.3	5.7	7.0	6.3	6.3	5.3	7.0	5.0	5.0	6.0	7.7	8.3	7.3	7.3	8.0	7.0	9.0	7.7	6.0
SR 8550 (SRX 8BE4)	7.0	7.0	8.7	7.3	5.7	6.7	6.0	6.7	6.0	7.0	4.3	5.0	6.0	7.3	7.3	7.0	7.7	8.7	7.0	9.0	7.7	6.0
R01-8007	7.0	7.0	8.7	7.0	6.0	6.3	6.0	6.7	5.7	7.0	4.3	4.3	5.7	7.7	8.7	8.0	7.7	8.7	7.0	9.0	7.3	6.0
PST-5JM	6.3	7.0	9.0	7.7	6.3	7.3	6.0	6.7	5.7	7.0	4.7	6.0	7.0	7.0	7.7	6.7	6.7	8.0	7.0	9.0	7.7	5.3
SIGNIA	5.3	7.0	8.7	7.7	5.7	7.0	6.7	7.0	5.7	7.0	4.0	5.7	5.7	7.3	7.7	6.0	8.7	7.0	9.0	7.0	7.3	5.7
MATADOR	6.0	7.0	9.0	7.3	6.3	7.3	6.3	6.3	4.3	7.3	5.0	5.3	5.3	7.3	8.0	7.0	7.0	8.7	8.0	9.0	7.7	6.8
MRF 27	6.7	7.0	9.0	7.3	6.7	8.0	6.7	6.7	6.0	7.0	4.0	4.7	5.7	7.0	6.7	6.3	8.0	7.3	9.0	7.0	7.7	6.0
EA 163	6.7	7.0	9.0	7.3	6.3	6.3	6.3	6.3	5.3	7.0	4.7	4.7	5.3	7.7	7.7	7.0	6.7	8.0	7.3	9.0	7.7	5.7
RAPTOR (CIS-TF-33)	6.0	7.0	8.3	7.0	6.0	7.7	5.7	6.7	5.7	6.7	4.7	4.7	6.3	7.7	7.7	7.0	6.7	8.0	6.7	9.0	7.7	6.0
PST-DDL	6.7	7.0	8.7	7.3	5.3	7.3	6.0	6.3	5.7	7.0	4.7	5.0	5.3	7.3	8.0	6.0	7.7	8.0	7.3	9.0	7.0	5.7
TRACER	6.0	7.0	9.0	7.3	5.0	9.0	6.3	7.0	5.0	7.0	4.3	5.0	5.3	6.7	7.7	7.0	6.0	8.3	7.0	9.0	7.3	6.0
CIS-TF-64	5.7	7.0	8.7	7.3	5.7	7.3	6.0	7.0	5.7	7.0	5.0	5.7	5.7	8.0	7.3	7.0	6.7	8.0	7.3	9.0	7.7	5.7
JT-9	5.7	7.0	9.0	7.0	5.7	7.3	6.7	6.3	5.3	7.0	4.7	4.7	5.7	7.0	6.7	6.7	7.7	8.0	7.3	9.0	7.3	6.0
COYOTE	6.3	7.0	8.7	7.7	6.0	6.7	6.3	5.0	7.0	5.3	5.3	5.7	7.0	7.3	7.0	6.0	8.0	7.0	9.0	7.3	5.3	6.7
MA 158	6.3	7.0	9.0	7.0	6.3	6.0	6.7	6.7	5.3	7.0	5.0	5.7	6.7	7.0	7.0	7.0	7.7	8.0	7.0	9.0	7.7	5.0
COCHISE III (018)	7.0	7.0	9.0	6.7	5.7	6.7	6.3	6.3	5.3	7.0	4.3	6.0	7.3	8.3	6.0	6.3	8.3	7.0	9.0	7.0	7.3	5.0
JT-12	5.0	7.0	8.7	7.3	5.3	7.3	6.7	7.0	5.3	7.0	5.0	4.7	5.7	7.3	7.0	7.3	7.0	7.0	8.0	7.0	9.0	7.7
MA 127	7.7	7.0	8.7	7.0	5.7	6.7	6.0	6.7	6.0	7.0	4.3	5.3	5.7	7.0	7.3	6.3	6.3	8.0	7.3	9.0	7.7	5.7
JUSTICE (RB2-01)	7.0	7.0	8.7	7.0	6.3	6.7	6.3	6.7	5.7	7.0	5.0	5.0	5.7	7.7	6.7	7.0	7.0	8.0	7.0	9.0	7.0	5.3
DAVINCI (LTF-7801)	5.7	7.0	9.0	6.7	6.3	6.7	6.7	6.7	5.3	7.0	4.7	5.0	5.3	8.0	7.3	7.3	7.7	8.0	7.0	9.0	7.3	6.0
SOUTHERN CHOICE II	6.3	7.0	9.0	7.3	6.7	6.7	6.7	6.7	5.0	7.0	4.3	5.3	5.3	6.7	6.7	6.7	7.3	8.0	7.0	9.0	7.3	5.7
T991	6.0	7.0	9.0	7.0	5.7	8.7	6.3	7.0	5.3	7.3	4.7	5.3	4.7	6.7	7.3	6.3	6.3	8.0	7.0	9.0	7.7	5.7
CAS-157	6.7	7.0	9.0	7.0	6.3	6.7	6.0	6.0	6.0	7.3	5.0	4.3	5.7	7.3	7.3	6.3	6.3	8.0	7.0	9.0	7.7	6.7

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Table 6 (cont.)

GENETIC COLOR RATINGS 1-9; 9=DARK GREEN 2/
2002 IRTA

NAME	ARI	CA3	GAI	IA1	IL1	IL2	IN1	KS2	MA1	MD1	M1	M12	M01	NCL	NJ1	NJ2	PA1	TX1	VA1	WA1	WA3	WI1	MEAN	
TEMPEST	5.7	7.0	9.0	7.0	6.7	7.0	6.7	5.3	7.0	4.7	4.7	5.7	6.7	6.3	7.7	7.7	7.0	9.0	7.3	5.7	5.7	6.7		
CAS-ED	6.7	7.0	8.7	7.0	6.3	7.0	6.0	6.7	6.0	7.0	4.3	5.0	5.7	7.0	6.7	6.7	8.0	7.0	9.0	7.0	5.7	6.7		
DAYTONA (NRF 23)	6.7	7.0	8.7	7.0	6.0	8.0	6.7	7.0	5.3	7.0	4.7	5.0	5.7	5.7	7.3	6.3	8.0	7.0	9.0	7.7	6.0	6.7		
QUEST	6.7	7.0	9.0	6.7	6.3	7.0	6.3	6.3	5.3	7.0	4.7	5.0	5.3	7.3	8.3	6.0	6.7	8.0	7.0	9.0	7.0	5.3	6.7	
AVENGER (L12)	6.7	7.0	8.7	7.3	5.3	6.3	6.7	6.7	5.7	7.0	4.0	5.3	5.3	7.7	7.7	6.7	6.0	8.3	7.0	9.0	7.3	5.7	6.7	
BALTIMORE	6.3	7.0	8.7	7.0	6.0	7.0	6.0	6.7	6.3	7.0	4.7	5.3	5.3	6.7	8.0	7.0	6.3	8.0	6.7	9.0	7.3	5.7	6.7	
FORTE (EE-2)	6.7	7.0	8.7	7.0	6.3	7.0	6.0	6.3	5.7	7.7	4.3	5.0	5.3	6.3	8.7	6.0	6.7	8.0	6.7	9.0	7.7	5.3	6.7	
MAEELLIAN (OD-4)	5.3	7.0	8.7	7.7	6.3	5.0	6.7	6.7	5.7	7.0	4.0	4.7	5.3	8.0	8.0	6.7	7.0	8.3	7.0	9.0	7.7	5.3	6.7	
PROSEEDS 5301	6.0	7.0	9.0	7.0	6.7	6.0	7.0	6.3	5.7	6.7	4.3	5.3	4.7	7.0	8.3	6.3	6.7	8.0	7.0	9.0	7.3	5.7	6.7	
PST-5T00	7.0	7.0	9.0	7.0	5.3	6.0	6.7	6.0	5.7	7.0	4.7	4.3	5.3	7.0	8.0	7.0	6.7	8.3	6.3	9.0	8.0	5.7	6.7	
REBEL SENTRY	7.0	7.0	9.0	7.3	6.0	6.7	6.0	6.7	5.0	7.0	4.3	4.7	5.0	6.3	7.3	7.0	6.3	8.0	6.7	9.0	7.3	5.7	6.7	
JT-15	5.3	7.0	8.7	7.0	6.3	6.7	6.3	6.7	5.0	7.3	5.0	4.7	5.0	7.0	8.0	7.0	6.3	8.0	7.3	9.0	7.0	6.0	6.7	
MUSTANG 3	6.3	7.0	8.7	7.0	5.3	5.7	6.0	5.3	5.3	7.0	4.3	5.0	5.3	7.3	9.0	7.3	6.3	8.0	7.7	9.0	7.3	5.7	6.7	
ATF 806	7.7	7.0	8.7	7.3	5.3	7.0	6.3	6.3	5.3	6.7	5.0	5.3	5.3	7.0	6.7	6.3	6.3	7.7	7.0	9.0	7.7	5.7	6.7	
ATF 799	7.0	7.0	9.0	7.0	6.0	6.3	6.7	6.0	5.3	7.0	4.3	4.7	4.7	6.7	6.7	6.7	7.0	7.0	8.0	7.0	9.0	7.0	6.7	
B-1001	5.3	7.0	9.0	6.7	6.0	7.0	6.0	6.3	5.3	7.0	4.3	5.0	5.0	7.7	7.3	7.0	6.7	8.3	7.7	9.0	7.3	5.3	6.7	
BARLEXAS II	6.7	7.0	9.0	7.7	6.3	6.7	6.3	6.7	5.0	7.0	5.0	4.7	5.3	6.3	7.7	7.0	6.0	8.3	7.0	9.0	6.7	5.7	6.6	
MA 138	5.3	7.0	8.7	7.7	6.3	6.0	7.0	5.3	5.7	7.0	5.0	5.0	6.0	7.0	5.7	7.0	7.0	7.0	8.0	7.0	9.0	7.3	5.7	6.6
KALAHARI	5.3	7.0	9.0	7.0	6.3	5.3	6.3	5.3	5.7	7.0	4.7	4.7	5.7	6.3	8.7	6.3	6.7	7.7	7.0	9.0	7.3	5.7	6.6	
PST-5F2D	5.0	7.0	9.0	7.0	5.7	5.3	6.3	6.0	5.3	7.0	4.7	4.7	5.7	6.7	8.7	5.7	6.3	8.0	6.7	9.0	8.0	6.0	6.6	
FINESSE II	5.7	7.0	9.0	7.3	5.7	6.3	6.0	6.7	5.7	7.0	4.0	4.7	5.0	6.7	7.0	7.0	6.7	8.0	6.3	9.0	8.0	6.0	6.6	
BLACKWATCH (PICK-OD3-01)	6.7	7.0	8.7	7.3	6.3	6.0	6.0	5.7	7.0	4.3	5.0	5.3	6.0	8.7	6.3	6.0	8.0	6.7	9.0	7.7	5.0	6.6		
CAS-MC1	5.7	7.0	9.0	7.3	6.3	6.0	6.0	5.0	5.0	7.0	4.3	5.0	5.7	7.3	8.0	6.0	6.7	8.0	6.7	8.7	7.3	5.7	6.6	
GRANDE II	6.3	7.0	8.7	7.0	6.3	5.3	6.3	6.3	5.7	7.0	4.7	5.3	5.0	7.0	7.0	6.0	6.7	8.0	6.7	8.7	7.3	5.7	6.6	
P-58	7.0	7.0	9.0	7.0	6.0	5.7	6.3	6.0	5.0	7.3	5.0	4.3	5.7	7.0	7.0	7.0	6.3	8.0	7.3	9.0	6.3	5.3	6.6	
PICK ZMG	6.3	7.0	8.7	7.0	6.0	5.7	6.0	6.3	5.3	7.0	4.7	5.3	5.7	7.0	8.0	6.7	6.3	8.0	6.7	9.0	6.7	5.3	6.6	
RENDITION	6.0	7.0	8.7	6.7	5.3	6.3	6.3	6.3	5.3	7.0	4.0	5.0	5.7	6.7	7.3	7.3	6.3	8.0	6.7	9.0	7.3	6.0	6.6	
GO-OD2	6.0	7.0	9.0	7.3	6.3	5.7	6.0	5.7	5.0	7.0	4.3	5.0	5.0	6.7	8.0	7.0	6.3	8.0	7.0	8.7	7.0	5.3	6.6	
P-4	5.3	7.0	8.7	7.0	6.0	5.0	6.0	6.3	5.7	7.0	4.7	5.0	5.0	7.0	8.7	6.0	6.0	8.0	6.7	9.0	7.7	5.3	6.6	
INFERNIC (JT-99)	5.0	7.0	8.7	6.7	6.0	5.3	6.3	5.3	5.7	7.3	4.0	5.7	5.0	7.3	8.0	6.0	6.7	8.0	6.7	9.0	7.0	5.3	6.6	
PST-5A1	6.3	7.0	8.3	6.3	5.3	7.3	6.3	5.0	5.0	7.3	4.7	5.0	5.0	7.0	7.3	6.3	6.3	8.0	7.0	8.7	7.7	5.3	6.6	
ATF-800	5.7	7.0	9.0	6.7	6.0	6.0	6.7	6.3	5.0	7.0	4.7	5.3	5.3	6.7	7.3	6.3	6.3	8.0	7.0	9.0	7.3	5.3	6.5	
GUARDIAN-21 (ROBERTS DOL)	5.7	7.0	9.0	7.3	6.0	6.0	6.0	5.7	7.0	4.3	5.0	5.3	7.7	8.0	5.7	6.3	8.0	6.7	9.0	7.0	6.0	6.5		
MCN-RC	5.7	7.0	8.7	7.7	6.3	6.3	6.7	6.3	4.3	7.0	4.3	4.7	5.3	6.7	8.0	6.3	5.7	8.0	7.0	9.0	7.0	6.0	6.5	
CAYENNE	6.7	7.0	8.7	7.0	6.0	5.0	5.0	5.7	5.0	7.0	4.3	5.0	4.7	7.0	8.7	7.3	6.3	8.3	6.7	9.0	7.0	5.7	6.5	
K01-E09	6.7	7.0	9.0	7.3	6.3	6.3	6.7	6.7	5.3	7.0	4.0	5.3	5.0	7.0	7.3	6.3	6.0	8.0	7.0	9.0	7.0	5.3	6.5	
K01-E03	6.0	7.0	8.7	7.3	5.3	6.7	6.3	6.7	5.3	7.0	4.3	4.7	5.0	6.3	7.7	6.7	6.0	8.7	7.0	8.7	7.3	5.0	6.5	
BARRINGTON	7.0	7.0	8.7	7.3	5.3	6.7	6.0	6.7	5.3	7.0	4.0	5.3	5.0	6.3	6.0	6.7	6.3	8.0	7.3	8.7	7.0	6.0	6.5	
DLSD	6.3	7.0	8.7	7.3	5.3	5.7	6.0	6.0	6.0	7.0	4.0	5.0	5.0	7.0	8.3	6.0	6.0	8.0	7.0	9.0	7.3	5.7	6.5	
BAR FA 1003	5.7	7.0	9.0	6.7	5.3	6.7	6.7	5.0	5.0	7.0	4.0	5.0	5.0	7.3	6.0	6.0	6.0	8.0	7.0	9.0	7.0	5.3	6.5	
CONSTITUTION (ATF-593)	5.7	7.0	8.7	7.3	6.3	6.3	6.0	6.3	5.3	7.0	4.0	4.7	5.0	6.7	7.7	6.0	6.3	8.0	7.0	9.0	7.0	5.3	6.5	
BAR FA 1005	5.7	7.0	9.0	7.0	6.3	6.7	6.0	6.0	5.3	7.3	4.7	5.0	5.0	6.3	7.0	6.7	6.0	8.3	6.3	8.7	7.3	5.3	6.5	
REBEL EXEDA	6.3	7.0	9.0	7.0	5.3	6.0	6.3	6.0	5.0	7.0	4.0	4.7	6.0	7.7	6.7	5.7	6.7	8.0	6.3	9.0	8.0	5.7	6.5	
2ND MILLENIUM	6.0	7.0	8.3	7.0	6.0	6.7	6.0	4.7	7.0	4.0	5.7	5.3	7.0	8.3	6.7	6.7	8.0	7.0	9.0	7.0	5.0	6.5		
PROSPECT	5.7	7.0	9.0	7.0	5.7	6.0	6.7	6.0	4.7	7.0	4.0	5.3	5.3	6.0	8.0	6.7	6.0	8.0	6.7	8.0	7.3	5.7	6.5	

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Table 6 (cont.)

GENETIC COLOR RATINGS OF TALL FESCUE CULTIVARS 1/
2002 DATA

NAME	GENETIC COLOR RATINGS 1-9; 9=DARK GREEN												2/												
	AR1	CA3	GA1	IA1	IL1	II2	IN1	KS2	MA1	MD1	MI1	MI2	MO1	NC1	NJ1	NJ2	PA1	TX1	VA1	WA1	WA3	WI1	MEAN		
SOUTH PAW (NRF 24)	5.7	7.0	9.0	7.3	5.7	7.0	6.0	6.0	5.0	7.0	5.0	4.7	5.7	7.3	6.3	6.7	7.7	7.0	9.0	6.7	5.3	6.5			
PST-5NAS	4.7	7.0	8.7	7.0	6.0	5.7	6.3	6.0	5.3	7.0	5.0	4.7	5.3	7.0	8.7	5.7	6.0	7.7	7.0	9.0	7.3	6.0	6.5		
CIS-TF-77	6.0	7.0	8.7	7.0	6.0	5.0	6.3	6.3	6.0	7.3	4.3	4.7	5.3	7.3	7.0	6.0	6.7	7.7	6.3	8.7	7.3	6.0	6.5		
PICASSO	6.0	7.0	9.0	7.3	6.0	6.0	6.3	6.0	4.7	7.0	4.7	5.3	5.3	6.7	8.0	6.3	6.0	7.7	7.0	8.7	6.7	5.3	6.5		
ATF 802	6.3	7.0	9.0	7.3	6.0	6.7	6.3	6.3	5.3	6.7	4.7	4.7	5.3	6.3	5.7	6.7	5.7	6.0	7.7	7.0	8.7	7.0	5.3	6.5	
FOCUS	6.7	7.0	8.7	7.0	6.3	5.7	5.7	6.3	5.3	7.0	4.0	5.3	5.3	6.7	6.7	7.0	6.3	6.3	8.0	7.0	8.7	7.3	5.0	6.5	
PADRE (NJ4)	6.7	7.0	8.7	6.7	6.0	5.0	6.3	5.7	6.0	7.0	4.0	4.0	5.3	7.3	8.7	7.7	6.7	6.3	7.3	7.7	6.3	7.0	6.0	6.5	
ATF-803	6.3	7.0	8.7	7.0	6.3	6.3	6.3	6.0	5.0	6.3	4.7	5.0	5.0	5.7	8.0	7.0	5.7	8.0	7.0	9.0	7.0	5.0	6.5		
ROBERTS SM4	5.3	7.0	9.0	7.0	6.0	5.3	6.0	6.7	5.3	7.0	4.7	4.0	5.7	7.3	7.0	7.0	7.0	6.0	7.7	7.0	9.0	7.0	5.3	6.5	
TOMAHAWK RT	6.7	7.0	8.7	7.0	6.0	6.7	6.3	6.3	5.3	7.0	4.7	4.7	5.3	6.7	6.3	6.0	5.7	8.3	6.3	8.7	7.3	5.3	6.5		
01-ORU1	5.7	7.0	8.3	7.0	6.3	5.3	6.0	6.0	5.0	7.0	4.3	5.0	5.3	6.3	8.0	6.0	6.3	8.0	7.0	9.0	7.3	5.3	6.5		
JTFFF-2000	6.0	7.0	9.0	7.3	5.0	7.0	6.0	6.0	5.3	6.7	4.7	4.3	5.7	6.3	6.3	6.7	6.3	6.7	7.0	9.0	7.0	7.0	6.5		
PURE GOLD	6.0	7.0	9.0	7.0	6.3	6.7	6.3	5.7	4.7	7.0	4.7	5.0	5.3	7.3	6.7	5.0	5.7	8.0	7.0	9.0	7.0	5.7	6.5		
TITANIUM (SBM)	6.3	7.0	8.3	7.7	5.0	6.0	6.0	6.0	5.0	7.0	4.3	5.0	5.3	7.0	8.0	6.3	6.0	7.7	6.7	9.0	7.0	5.7	6.5		
PLANTATION	6.3	7.0	8.7	7.0	5.7	6.3	6.0	6.3	5.0	7.0	4.0	5.0	5.3	6.7	7.3	6.0	6.0	8.0	7.0	9.0	7.0	5.7	6.5		
PST-57E	6.7	7.0	9.0	6.7	6.0	5.3	6.0	5.7	5.0	7.0	4.7	4.3	5.3	6.3	7.7	6.3	6.3	8.0	6.7	9.0	7.0	6.0	6.5		
R-4	6.0	7.0	8.7	7.0	6.7	6.0	6.0	6.7	4.7	7.0	4.3	5.0	5.0	6.7	8.0	6.7	6.3	7.7	6.3	9.0	7.0	5.3	6.5		
01-RUTOR2	6.0	7.0	9.0	7.0	6.0	6.0	6.0	6.0	5.0	7.0	5.0	5.0	5.7	6.7	6.7	6.7	6.3	8.0	7.0	9.0	7.0	6.7	6.4		
PST-5BZ	5.0	7.0	8.3	7.0	6.0	6.3	6.0	6.0	5.3	7.0	4.7	4.7	5.0	7.0	8.3	6.7	6.7	6.0	8.0	7.0	9.0	7.0	5.3	6.4	
BE1	5.3	7.0	8.7	7.3	6.0	5.3	6.7	6.0	5.0	7.0	4.7	5.0	5.0	6.7	7.3	6.0	6.0	7.0	7.0	9.0	7.0	5.3	6.4		
DLF-J210	6.3	7.0	8.7	7.0	5.7	6.0	6.3	6.3	5.3	7.0	4.7	5.0	5.0	6.0	7.0	5.7	6.0	7.0	7.3	7.0	9.0	7.0	5.0	6.4	
PICK-00-AFA	7.3	7.0	9.0	6.7	5.7	6.0	5.7	6.0	4.7	7.0	5.0	5.0	6.7	7.7	7.7	6.0	6.0	7.7	7.0	8.7	7.0	5.0	6.4		
BARRERA	6.0	7.0	8.3	6.7	5.0	5.7	6.7	6.7	6.0	7.0	4.3	5.0	5.3	6.7	6.0	6.7	6.0	6.0	7.7	7.0	9.0	7.0	5.7	6.4	
PST-5KI	6.3	7.0	8.7	7.3	5.7	5.0	6.0	6.0	5.0	7.0	4.7	5.7	5.3	6.3	7.3	5.0	5.7	8.3	6.7	7.0	7.0	9.0	7.0	5.3	6.4
SR 8250	6.3	7.0	8.7	7.0	5.7	6.7	6.0	6.3	5.0	7.0	4.7	5.3	5.3	6.7	7.3	6.0	6.0	7.3	7.0	9.0	7.0	5.0	6.4		
PICK TF H-97	7.0	7.0	9.0	7.3	5.0	6.3	6.3	5.7	5.0	6.7	5.0	4.7	5.0	7.3	6.0	5.7	6.0	7.0	7.3	7.0	8.7	7.0	5.0	6.4	
PST-5BAB	5.3	7.0	8.0	7.0	5.7	5.3	6.0	6.0	5.0	7.0	4.7	4.7	5.7	6.7	8.7	6.0	6.3	8.0	7.0	8.3	7.0	5.0	6.4		
KITTY HAWK 2000	5.7	7.0	8.7	6.7	5.7	6.0	6.7	6.3	6.0	7.0	4.7	4.7	5.3	7.0	7.0	6.0	6.0	8.0	7.0	9.0	6.7	5.3	6.4		
SR 8600	6.0	7.0	9.0	6.7	5.7	6.0	6.0	5.7	5.3	7.0	4.7	5.3	5.3	7.0	6.3	5.3	6.0	7.7	7.0	9.0	7.0	5.7	6.4		
DP 50-9226	6.3	7.0	9.0	6.3	5.3	6.0	6.7	6.0	5.0	7.0	4.3	4.7	5.3	6.7	7.3	6.3	5.7	7.7	7.0	8.7	7.0	5.7	6.4		
ATF 707	6.3	6.7	8.7	7.3	7.0	6.7	6.0	6.0	4.3	7.3	4.3	4.3	5.0	5.3	5.3	5.3	5.7	6.0	8.0	7.0	9.0	7.0	5.0	6.4	
PST-5T1	5.7	7.0	8.7	6.7	5.0	6.3	6.0	5.7	5.7	6.7	5.3	4.3	5.0	6.3	7.3	5.3	5.3	6.0	7.0	7.0	9.0	7.0	5.3	6.3	
LARAMIE	5.3	7.0	8.7	7.0	5.7	6.0	5.7	4.7	7.0	4.0	4.7	5.3	7.0	4.3	6.7	6.3	8.0	7.3	9.0	6.7	8.7	6.7	5.3	6.4	
PST-5S12	6.3	7.0	8.3	7.0	5.7	5.3	6.0	5.7	4.0	7.0	5.0	5.0	5.3	6.7	8.3	4.7	6.0	8.0	6.3	9.0	6.7	9.0	6.3		
REMBRANDT	5.7	7.0	8.3	7.0	6.0	4.3	6.3	6.0	4.7	6.7	4.3	5.0	5.3	7.0	8.3	5.0	5.3	6.0	7.0	7.0	8.7	7.0	5.3	6.3	
MILLENNIUM	6.3	7.0	8.7	6.7	5.7	5.0	5.7	4.7	7.0	4.0	5.7	5.7	6.7	7.0	7.0	6.0	6.7	7.7	6.3	8.7	7.0	5.3	6.3		
DYNASTY	6.7	7.0	8.7	7.3	5.3	4.7	5.7	5.0	7.0	4.7	5.7	5.0	6.0	7.7	4.0	6.0	7.3	7.0	9.0	7.0	7.3	5.3	6.3		
KOI-WAF	5.7	7.0	8.3	7.0	6.0	5.7	6.0	5.7	4.7	6.3	4.7	5.0	7.0	8.0	4.7	5.7	8.0	7.0	9.0	7.0	5.0	6.3			
SCORION	5.7	7.0	8.7	7.0	6.0	5.3	6.3	4.7	7.0	4.3	4.7	5.3	7.0	6.7	4.7	6.0	8.0	6.7	9.0	6.7	9.0	6.3			
BRAVO	6.3	7.0	8.7	7.0	5.3	5.3	6.3	4.7	7.0	4.0	5.3	5.0	6.0	7.0	5.3	6.0	5.3	8.0	6.7	8.0	7.0	5.3	6.2		
TF66	6.7	7.0	8.3	7.0	5.7	6.3	6.7	6.3	5.0	6.3	4.0	5.0	5.0	6.0	5.3	5.0	5.3	8.3	6.3	8.7	6.7	5.7	6.2		
PST-5LO	6.0	7.0	8.7	6.7	5.3	5.0	5.7	4.7	7.0	5.0	5.0	5.0	6.0	7.0	4.3	6.0	8.0	6.7	9.0	7.0	7.3	5.0	6.2		
BARLEXAS	6.3	7.0	9.0	6.7	5.3	5.3	6.3	4.7	7.0	4.0	5.0	5.3	6.3	5.3	5.3	5.3	5.3	7.0	6.7	8.3	7.0	5.0	6.2		
SILVERSTAR (PST-5ASR)	5.7	7.0	8.3	6.7	6.0	4.0	5.7	6.0	4.7	6.7	4.7	5.0	5.7	6.7	5.7	5.3	5.3	8.0	7.0	9.0	7.0	5.3	6.2		
ATF 586	5.7	7.0	8.7	7.0	5.3	5.3	6.0	5.7	5.0	6.0	5.7	5.0	5.3	6.3	5.3	5.3	6.0	8.0	6.3	8.7	7.3	5.3	6.1		

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Table 6 (cont.)

GENETIC COLOR RATINGS OF TALL FESCUE CULTIVARS 1/
2002 IRTA

NAME	ARI	CAB	GAI	IAI	IL1	IL2	IN1	KS2	NA1	MD1	MI1	M12	M01	NC1	NJ1	NJ2	PA1	TX1	VA1	WA1	WA3	WI1	MEAN
ATE 704	5.3	7.0	8.7	7.0	5.0	6.0	6.0	6.3	5.0	7.0	4.3	4.7	5.0	6.0	5.3	5.7	5.3	8.0	7.0	8.3	7.0	5.0	6.1
MASTERPIECE	5.0	6.7	9.0	6.3	5.7	4.7	6.0	6.0	4.7	6.7	4.7	5.7	5.3	5.3	4.3	5.7	5.7	7.7	7.0	8.7	7.3	5.0	6.1
SILVERADO II (PST-578)	5.3	7.0	8.7	6.7	5.3	5.0	6.3	6.0	4.3	6.7	5.0	5.7	5.0	6.0	7.0	4.0	6.0	8.0	6.3	8.3	7.3	5.0	6.1
OLYMPIC GOLD	5.7	7.0	8.0	6.3	5.3	6.3	6.0	4.7	6.3	4.7	5.3	5.3	5.3	6.7	5.0	5.3	7.7	7.0	8.3	7.3	5.0	6.1	
O1-TFOR3	5.7	7.0	8.0	7.0	5.7	6.0	6.0	6.3	4.7	6.7	4.7	5.0	4.7	5.0	7.0	5.3	7.7	7.0	8.3	7.0	9.0	7.3	5.0
TAR HEEL II (EST-5TR1)	6.7	7.0	8.7	7.0	5.7	4.3	6.0	5.7	5.3	6.7	4.7	5.0	6.3	6.0	3.3	5.3	8.0	6.3	8.3	6.3	5.3	6.0	
FALCON II	6.0	6.7	8.0	6.7	6.0	4.0	6.0	6.0	4.0	6.7	4.3	5.7	5.0	8.0	5.7	4.3	5.7	7.3	6.7	8.0	6.7	5.0	6.0
LANCER	5.7	6.7	8.0	7.0	5.7	6.3	6.7	5.7	3.7	7.0	4.3	4.7	5.0	6.0	4.0	5.7	5.0	7.7	7.7	8.7	7.0	5.0	6.0
ENDEAVOR	6.0	7.0	8.0	7.0	6.0	4.3	5.7	4.0	6.3	4.7	5.0	5.0	6.3	7.0	3.3	5.0	7.0	7.7	6.7	8.7	7.0	5.0	6.0
LEGITIMATE	6.7	7.0	8.3	6.0	6.0	3.7	6.0	6.3	4.0	6.7	4.3	4.7	5.0	6.3	7.0	3.3	5.0	7.7	6.7	8.3	7.0	5.0	6.0
WATCHDOG	5.3	7.0	9.0	7.0	5.0	4.0	5.7	6.0	4.0	6.7	4.7	5.3	5.0	6.0	4.0	5.0	6.0	4.3	6.0	7.3	6.7	8.0	6.3
WYATT	6.0	7.0	8.0	6.3	5.7	5.7	6.0	6.3	4.0	6.3	4.3	5.7	5.0	6.0	4.0	5.0	6.0	8.0	6.0	8.7	7.0	5.0	5.9
BONSAI	6.0	7.0	8.0	6.3	5.3	5.7	6.0	6.0	3.7	6.3	4.3	4.7	5.0	6.7	3.3	5.7	8.0	6.3	7.7	6.3	5.0	5.9	
TAR HEEL	5.7	7.0	8.3	6.7	5.7	4.3	6.0	4.0	6.3	4.7	5.0	5.3	6.3	5.3	6.3	5.3	6.3	5.0	7.0	8.3	6.3	5.0	5.9
TULSA II (ATF 706)	6.0	6.7	8.0	7.7	5.0	4.7	5.7	5.7	3.7	6.3	4.0	4.7	5.0	6.0	4.7	5.3	5.3	6.0	7.0	8.3	7.0	5.0	5.9
JAGUAR 3	6.3	7.0	8.0	7.0	6.0	3.7	5.7	5.7	4.0	6.7	4.0	5.0	5.0	6.0	4.3	5.0	6.0	4.3	5.0	8.0	6.7	8.7	6.7
GO-STU2	5.7	7.0	8.0	6.7	5.0	4.0	6.3	5.3	4.3	6.3	4.7	4.7	5.0	6.0	4.0	5.0	5.0	7.3	6.7	7.7	6.7	5.0	5.9
WOLFPACK	5.3	7.0	8.0	6.3	5.3	5.3	6.0	5.3	4.0	6.0	4.0	4.7	5.0	5.0	5.0	5.0	5.0	5.7	7.3	6.7	7.7	7.0	5.8
DOMINTON	6.0	7.0	8.0	6.3	5.3	3.7	5.7	6.0	4.0	6.7	4.0	5.0	5.0	6.0	3.7	5.3	5.3	6.0	7.0	8.0	7.0	5.0	5.8
GO-RD4	5.3	7.0	8.7	6.0	5.0	5.3	6.3	5.3	4.7	6.0	4.0	4.3	5.0	6.0	3.3	5.3	5.3	7.7	5.7	8.0	6.7	5.0	5.8
TITAN LTD.	6.3	7.0	8.3	6.3	5.3	5.7	5.7	5.3	3.3	6.3	4.3	4.7	4.7	4.0	4.0	4.0	5.0	7.3	7.3	8.3	7.0	5.0	5.7
STETSON	6.3	6.7	8.0	6.7	5.3	3.7	5.7	5.0	3.0	6.3	4.7	4.7	4.7	4.0	3.3	5.7	7.3	6.0	8.3	6.7	5.0	5.7	
DP 50-9082	5.7	6.7	8.3	6.0	5.7	3.0	5.7	5.3	4.0	5.7	4.0	4.7	4.7	4.7	4.3	3.7	5.0	7.3	6.0	7.0	6.3	5.0	5.5
GO-EL3	5.7	6.7	8.0	6.0	4.7	2.0	5.7	5.0	3.0	5.3	4.3	4.3	4.3	6.7	1.3	3.5	5.7	7.0	6.3	7.0	7.0	5.0	5.4
ELISA	5.0	6.3	8.0	6.3	4.3	2.3	5.7	5.0	3.0	5.3	4.0	5.0	4.7	2.7	2.3	4.7	6.7	5.7	6.3	5.7	5.0	5.0	5.0
KY-31 E+	3.3	5.0	7.0	4.0	3.7	1.0	5.0	4.0	2.3	4.0	4.0	5.0	4.7	3.7	1.0	3.0	4.3	4.0	4.3	5.0	4.0	3.9	3.9
LSD VALUE	1.1	0.2	0.6	0.9	1.2	1.5	0.8	1.1	0.9	0.5	1.2	1.1	0.8	1.5	2.2	1.6	0.9	0.6	0.9	0.6	1.0	0.7	0.2
C.V. (%)	11.5	2.0	4.6	8.1	12.8	15.6	7.8	10.8	10.7	4.8	16.5	13.2	9.7	14.0	19.8	16.3	9.0	5.1	7.9	3.9	8.5	7.6	10.4

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

2004 000 45

Table 7. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity, near Rathdrum, ID in 2006.

Cultivar	Panicle length (cm)			Sheath length (cm)			Height from ground to flagleaf (cm)			Plant height (cm)		
	Means	N	prob.	Means	N	prob.	Means	N	prob.	Means	N	prob.
Inferno	14.1	71		15.9	71		40.2	71		72.9	71	
Jaguar 4G	13.3	70	0.054	16.1	70	0.588	42.0	70	0.214	75.3	70	0.206
Rebel 2000	16.6	70	0.000	18.0	70	0.000	43.0	70	0.059	79.3	69	0.001
Coronado	15.6	149	0.000	17.8	149	0.000	43.5	149	0.008	79.4	149	0.000
Quest	15.8	70	0.000	17.4	70	0.000	44.9	70	0.001	82.6	70	0.000
Arid	18.5	68	0.000	20.5	68	0.000	51.3	68	0.000	89.8	68	0.000
Jaguar 3	19.3	70	0.000	20.4	70	0.000	51.7	70	0.000	91.7	75	0.000
Kentucky 31	22.1	71	0.000	23.7	71	0.000	59.5	71	0.000	103.1	71	0.000
All Groups	16.1	920		17.8	920		44.3	920		80.9	924	
CV%	15.8			14.4			19.2			13.5		

*Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom. Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability.

Table 8. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity, near Nine Mile, WA in 2006.

Cultivar	Panicle length (cm)			Sheath length (cm)			Height from ground to flagleaf (cm)			Plant height (cm)		
	Means	N	prob.	Means	N	prob.	Means	N	prob.	Means	N	prob.
Inferno	14.9	72		15.9	72		35.3	72		75.3	72	
Jaguar 4G	13.6	72	0.003	16.2	72	0.623	38.3	72	0.024	78.6	72	0.038
Pixie	16.4	72	0.001	17.9	72	0.000	38.4	72	0.017	82.6	72	0.000
Coronado	17.6	72	0.000	19.5	72	0.000	40.0	72	0.000	85.6	72	0.000
Quest	15.9	72	0.026	18.0	72	0.000	43.2	72	0.000	87.1	72	0.000
Rebel 2000	18.2	71	0.000	20.1	75	0.000	43.7	71	0.000	87.8	71	0.000
Jaguar 3	16.7	71	0.000	18.3	71	0.000	42.1	71	0.000	88.0	71	0.000
Arid	20.1	71	0.000	22.4	71	0.000	50.0	71	0.000	97.6	71	0.000
Kentucky 31	21.0	72	0.000	24.5	72	0.000	55.9	72	0.000	107.6	72	0.000
All Groups	16.3	934		18.1	938		40.7	934		84.6	934	
CV%	16.3			16.4			19.5			11.5		

Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom. Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability.

Table 9. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity, near Rathdrum, ID in 2006.

Variety	Flag leaf			Flag leaf			Second leaf					
	Length (cm)		Means	width (mm)		Means	Length (cm)		Means	N	prob.	
	N	prob.		Means	N		Means	N				
Inferno	9.6	49	5.7	49		15.7	48		7.8	49		
Jaguar 4G	7.5	70	0.0065	4.6	70	0.0008	13.0	70	0.0012	6.2	70	0.0000
Quest	10.8	76	0.1137	6.2	77	0.0976	17.5	77	0.0297	7.6	77	0.4595
Jaguar 3	12.1	67	0.0010	6.7	66	0.0012	20.1	67	0.0000	8.5	69	0.0144
KY-31	12.7	38	0.0004	6.7	38	0.0074	22.3	39	0.0000	8.6	38	0.0141
Rebel 2000	12.7	52	0.0001	6.7	51	0.0029	20.2	53	0.0000	8.7	52	0.0028
Coronado	12.9	60	0.0000	6.4	60	0.0398	19.7	61	0.0000	8.6	62	0.0065
All Groups	10.5	664	6.0	671		17.2	673		7.7	673		
CV%	39.3		28.9			25.4			19.2			

*Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom. Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability.

Table 10. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity, near Nine Mile, WA in 2006.

Variety	Flag leaf			Flag leaf			Second leaf			Second leaf		
	Length (cm)		Means prob.	width (mm)		Means prob.	Length (cm)		Means prob.	width (mm)		Means prob.
	Means	N		Means	N		Means	N		Means	N	
Inferno	6.4	61	5.4	62	11.6	61	7.2	62				
Jaguar 4G	6.5	62	0.9011	4.9	65	0.0902	11.1	64	0.3309	6.7	65	0.0653
Quest	6.9	66	0.3652	6.0	63	0.0467	12.2	65	0.2645	6.9	64	0.3877
Pixie	8.2	65	0.0028	5.8	64	0.2382	13.0	65	0.0143	7.4	64	0.4311
Jaguar 3	8.8	60	0.0001	6.3	60	0.0052	15.8	60	0.0000	8.4	60	0.0000
Rebel 2000	9.3	62	0.0000	6.6	61	0.0001	14.1	61	0.0000	7.5	62	0.1855
Coronado	9.7	66	0.0000	5.9	68	0.1008	13.8	66	0.0001	7.4	68	0.4543
Arid	10.0	62	0.0000	6.0	64	0.0519	16.2	64	0.0000	8.2	65	0.0003
KY-31	11.8	63	0.0000	6.6	62	0.0000	19.0	64	0.0000	8.8	62	0.0000
All Groups	7.9	819	5.6	828	13.1	831	7.4	833				
CV%		41.5	30.0		24.1			21.1				

*Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom. Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability.

Table 11. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity at Rathdrum, ID in 2006.

Variety	Winter damage			Head emergence			% Anthesis June 12th		
	Means	N	prob.	Means	N	prob.	Means	N	prob.
Inferno	4.1	80		32.7	26		53.4	40	
KY-31	4.1	40	0.9854	29.5	14	0.0000	89.0	15	0.0000
Pixie	4.0	80	0.8403	31.9	25	0.1592	59.4	32	0.3117
Jaguar 4G	4.5	80	0.4467	32.3	30	0.4913	64.5	39	0.0487
Quest	4.1	80	0.8932	32.5	27	0.7200	73.7	34	0.0005
Coronado	4.2	80	0.8055	32.9	27	0.7894	49.7	34	0.5292
Arid	5.1	80	0.0603	33.1	38	0.5256	64.2	51	0.0405
Jaguar 3	5.5	80	0.0084	33.3	41	0.3200	51.6	49	0.7436
Rebel 2000	4.3	80	0.6870	34.0	27	0.0380	57.6	36	0.4579
All Groups	4.3	1000		32.6	360		59.1	464	
CV%	81.3			6.6			42.3		

*Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom. Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Winter damage was rated on 1-9 scale where 9 = no damage and 1 = dead. Head emergence was rated in days after May 1st. % anthesis was rated on % of plant with pollen on June 12, 2006.

Table 12. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity at Rathdrum, ID in 2006.

Variety	Pollen color			% Purple pollen		% Yellow pollen		% other pollen color	
	Means	N	prob.	Means	prob.	Means	prob.	Means	prob.
Inferno	7.9	26		0.73		0		0.27	
Pixie	8.3	25	0.4635	0.84	0.3737	0	1.0	0.16	0.35461
Quest	8.3	27	0.4823	0.81	0.4852	0	1.0	0.19	0.46768
Rebel 2000	8.3	27	0.5267	0.81	0.4852	0	1.0	0.19	0.46768
Arid	8.2	38	0.5955	0.82	0.4460	0	1.0	0.18	0.42772
Jaguar 3	8.1	41	0.6815	0.78	0.6509	0	1.0	0.22	0.63765
Coronado	7.7	27	0.7313	0.67	0.5945	0	1.0	0.33	0.57957
KY-31	7.4	14	0.4403	0.50	0.1127	0	1.0	0.50	0.09888
Jaguar 4G	6.3	30	0.0023	0.63	0.4068	0.30	0.0	0.07	0.07321
All Groups	7.9	360		0.74		0.03		0.24	
CV%	24.5			59.5		539.0		176.1	

*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Pollen color was rated on a 1 to 9 scale as 1= yellow and 9= purple. The % yellow, % purple, and % other pollen color were derived by separating the pollen color rating by classes, those in the other category rated between 2 and 8.

Table 13. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity, near Nine Mile, WA in 2006.

Variety	Winter damage			Head emergence			% Anthesis June 7th			Pollen color		
	Means	N	prob.	Means	N	prob.	Means	N	prob.	Means	N	prob.
Inferno	6.7	80		30.5	51		68.1	51		6.4	51	
KY-31	7.1	80	0.5121	28.7	57	0.0000	93.6	63	0.0000	6.8	56	0.0950
Quest	6.6	80	0.7894	30.3	51	0.4878	73.2	53	0.2838	6.7	51	0.1951
Jaguar 3	6.4	80	0.5765	30.3	49	0.4243	70.0	54	0.6923	7.2	48	0.0005
Jaguar 4G	6.3	80	0.4091	30.3	49	0.6303	67.2	51	0.8469	6.6	49	0.4159
Rebel 2000	6.8	80	0.8081	30.7	53	0.3665	59.5	54	0.0680	6.5	53	0.6224
Pixie	6.6	80	0.7894	30.5	50	0.7859	55.4	52	0.0074	6.6	50	0.4409
Coronado	6.6	80	0.8460	30.5	52	0.8476	54.6	52	0.0045	5.8	52	0.0099
Arid	6.0	80	0.1453	29.8	44	0.0108	51.9	44	0.0011	6.4	43	0.8555
All Groups	6.6	1039		30.1	656		66.9	684		6.6	653	
CV%	49.7			4.3			36.0			18.4		

*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Winter damage was rated on 1-9 scale where 9 = no damage and 1 = dead. Head emergence was rated in days after May 1st. % anthesis was rated on % of plant with pollen on June 7, 2006. Pollen color was rated on a 1 to 9 scale as 1= yellow and 9= purple.

Table 14. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity at Rathdrum, ID in 2006.

	Lemma length (mm)			Lemma width (mm)			Seed weight (gram/100 seed)		
	Means	N	prob.	Means	N	prob.	Means	N	prob.
Inferno	5.39	538		1.28	538		0.1724	12	
Jaguar 4G	5.20	498	0.0000	1.28	498	0.3906	0.1737	12	0.8352
Quest	5.36	522	0.5094	1.27	522	0.1241	0.1688	12	0.5645
Rebel 2000	5.37	530	0.6005	1.29	530	0.6751	0.1686	12	0.5458
Pixie	5.37	463	0.6387	1.27	463	0.0837	0.1691	12	0.6008
Coronado	5.59	574	0.0000	1.27	574	0.0696	0.1720	12	0.9503
Arid	5.74	517	0.0000	1.30	517	0.0549	0.1769	12	0.4787
Jaguar 3	5.85	507	0.0000	1.32	507	0.0000	0.1761	12	0.5618
KY-31	6.35	241	0.0000	1.43	241	0.0000	0.2115	6	0.0000
All Groups	5.45	6336		1.28	6336		0.1726	150	
CV%	13.4			10.9			8.9		

*Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom. Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability.

Table 15. Morphological characteristics of tall fescue (*Festuca arundinacea* Schreb.) cultivars at reproductive maturity, near Nine Mile, WA in 2006.

Variety	Lemma length (mm)			Lemma width (mm)			Seed weight (gram/100 seed)		
	Means	N	prob.	Means	N	prob.	Means	N	prob.
Inferno	5.60	567		1.33	567		0.2	12	
Coronado	5.48	576	0.0188	1.26	576	0.0000	0.2	12	0.6099
Jaguar 4G	5.58	504	0.6925	1.30	504	0.0023	0.2	12	0.4827
Pixie	5.66	500	0.2317	1.37	500	0.0000	0.2	12	0.0016
Quest	5.85	462	0.0000	1.34	462	0.4183	0.2	12	0.0426
Jaguar 3	5.88	481	0.0000	1.30	481	0.0037	0.2	12	0.0659
Rebel 2000	6.00	531	0.0000	1.34	531	0.1436	0.2	12	0.0192
Arid	6.02	496	0.0000	1.39	496	0.0000	0.2	12	0.0335
KY-31	6.69	489	0.0000	1.46	489	0.0000	0.2	12	0.0000
All Groups	5.76	6613		1.33	6616		0.2	156	
CV%	14.2			11.7			10.8		

*Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom. Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICEEXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)
Rutgers, The State University of New Jersey and Jathkin Seed by Simplot
 (ST: 9/18/07)

2. TEMPORARY DESIGNATION
OR EXPERIMENTAL NUMBER

JT-99, L1J3. VARIETY NAME

Inferno

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)

59 Dudley Road
New Brunswick, NJ 08901-8520

5. TELEPHONE (Include area code)

732-932-9711

6. FAX (Include area code)

732-932-9441

(ST: 9/18/2007)

7. PVPO NUMBER

#200400145

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

 YES NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

 YES NO

10. Is the applicant the original owner?

YES

NO

If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

YES

NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

YES

NO

If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

- If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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